Clarification
Metropolitan Planning TECHNICAL REPORT No. 4

The title of the Capital District transportation Committee Report reads "Transportation Improvement Program Project Selection Process". This title refers to the local description of the Transportation Improvement Program development process and does not mean project selection pursuant to 23 CFR 450.332.

U.S. Department
of Transportation
**Federal Highway
Administration**

METROPOLITAN PLANNING TECHNICAL REPORT

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Programming ISTEA Funding

Transportation Improvement Program Project Selection Process

— **Capital District Transportation Committee**

Maximizing Regional Transportation Investments in the ISTEA Era: A guide for Programming ISTEA's Flexible Funds

— **Metropolitan Transportation Commission**

This is one of a series of reports issued periodically by the Federal Highway Administration's Office of Environment and Planning, Metropolitan Planning Division (HEP-20), 400 Seventh Street, SW, Washington, DC 20590. The purpose of the series is to share the latest information on metropolitan planning techniques and analytical procedures. This series will include the results of in-house and contract research, papers written or presented by staff, and summaries of workshops or conferences. Comments on these reports, and recommendations for material to include are welcome.

PREFACE

This is the fourth in a periodic series of reports issued by the Metropolitan Planning Division, Federal Highway Administration. The two reports in this issue focus on programming Intermodal Surface Transportation Efficiency Act (ISTEA) funding.

The first report provides a description of the multimodal project selection process used by the Capital District Transportation Committee in Albany, NY for its Transportation Improvement Program (TIP). These pages excerpted from the 1993-98 TIP focus on the project selection criteria used in developing its most recent an update. The second report provides a detailed discussion of the project selection process used by the Metropolitan Transportation Commission. This report is divided into sections based on the following four funding sources: Surface Transportation Program, Transportation Enhancement Activities, Congestion Mitigation and Air Quality Improvement, and Federal Transit Act Section 9. Note the a paper comparing and contrasting these two evaluation processes title "Multimodal Project Evaluation: A common Framework - Different Methods" (TRB-940215) was presented at the 1994 Transportation Research Board Annual Meeting.

The Intermodal Surface Transportation Efficiency Act (ISTEA) provided increased latitude in directing federal funds to surface transportation projects deemed most beneficial to a region, regardless of mode. This new freedom is accompanied by new responsibilities for project evaluation across modes. Some States and Metropolitan Planning Organizations (MPOs) are developing the necessary changes to fulfill these responsibilities. This document is intended to assist MPOs as they develop a Transportation Improvement Program (TIP) to meet the unique circumstances of their region.

It is recognized that each MPO is different and all MPOs are not likely to implement a process identical to the ones described in this document. A region does not need to "copy" the processes depicted here to benefit from the report. For some MPOs the most appropriate action would be to apply only a portion of what is described, others may chose to use a simplified version of these structures, and still others may elect to develop an entirely different process.

This document is provided solely to share knowledge that has been gained from two MPO's experiences. It does not suggest that States or MPOs are in any way required to perform investment analyses according to the methods described herein.

ALBANY'S

TRANSPORTATION IMPROVEMENT PROGRAM

PROJECT SELECTION PROCESS

CAPITAL DISTRICT TRANSPORTATION COMMITTEE

PROJECT SELECTION PROCESS

Projects were selected for inclusion in this TIP based on a selection process cooperatively developed by the CDTC Staff, NYSDOT, CDTA, other members of CDTC's Planning Committee and other interested parties. In general, the overall process requires the identification of candidate highway and transit projects, the objective evaluation of the merits of each project, and selection of projects in accordance with a set of principles. The following discussion details this overall programming process associated with the development of the updated 1993-98 TIP and its annual element. Project selection for dedicated transit funds (FTA Sections 3, 9, 16(b)2, and 18) are considered separately.

CDTC's STP, NHS and CMAQ Project Selection Process

The 1993-98 TIP represents a major achievement in advancing the project selection techniques used in the Capital District. Major program changes and increased monetary authorizations included in the ISTEA resulted in significant programming capacity an increase in the number and variety of project proposals. Together with Federal Clean Air Act Amendments of 1990 and the Americans with Disabilities Act (ADA) requirements, the ISTEA requirements to address intermodal issues, base project selection upon performance based standards, and to fairly consider a wider array of eligible projects caused CDTC to significantly modify its project selection approach. However, a history of the use of evaluation techniques based upon benefit/cost analyses and substantial modeling efforts put CDTC in a strong position to develop a set of criteria to meet the challenges and take advantage of the opportunities presented by this programming exercise.

BASIC APPROACH: The following approach was used in developing the 1993-98 TIP in the Capital District:

1) **Minimum requirements were established that each project was required to meet.** These were basic "screening" criteria that insured that every project considered for programming was consistent with the long range transportation plan and local land use plans, had reasonable cost estimates and a funding plan, and had been justified.

2) **The merits of every project that met the minimum requirements were fairly evaluated.** Following ISTEA mandates, life cycle costs and the use of performance based standards were an integral part of the merit evaluation. The merit evaluation procedure used the best available information from CDTC's models, from corridor studies, and from the project sponsor. Wherever possible, measures that cut across modes, such as relative cost effectiveness, were used. The qualitative aspects of projects were directly incorporated into this merit evaluation procedure. This merit

evaluation had a different emphasis, although the same criteria were used, for the following project types:

* Congestion Mitigation and Air Quality (CMAQ) projects;
* Mobility projects;
* Infrastructure projects;
* Safety projects;
* Planning studies;
* "Enhancement" projects; and
* Economic Development projects.

3) **A "balanced" TIP that will contribute to a staged regional plan for maintenance of essential facilities and services, demand management and capacity improvements was then produced.** A set of principles to guide the programming was developed that addressed modal, geographic, and functional equity, the ability of the project to be funded through other sources, and project readiness (ability to obligate funds in year of programming). Because project merit was evaluated with different emphasis by project type, it was at the programming stage that the balance of project types was achieved. This approach made the modal, geographic, and functional trade-offs after the merit evaluation was completed.

The TIP as a whole, must, according to federal law, conform to the Federal Clean Air Act, be financially "reasonable", be consistent with the long range plan, and address fifteen factors spelled out in ISTEA Section 134(f). Conformity with the Federal Clean Air Act was found, in cooperation with NYSDOT, using a methodology developed cooperatively by NYSDOT and the U.S. Environmental Protection Agency (EPA). This methodology, which includes use of the CDTC's Systematic Evaluation and Planning (STEP) model to estimate PM peak hour Vehicle Miles Traveled (VMT) and speed data, incorporates projected changes in land use and population, and emissions estimates from the Environmental Protection Agency's MOBILE 4.1 software was applied after the TIP had been formulated. Financial "reasonability" was determined both at the project level in the screening criteria and for the program as a whole. Consistency with the long range plan was determined on a project level at the time projects were screened for inclusion in the TIP, and the implementation of RTP goals and objectives was one of the primary programming considerations outlined below. In addition, the Air Quality conformity analysis included examination of the long range plan which has the five-year TIP as a component. An analysis of how the following methodology addresses the ISTEA 15 factors is found on page 83.

SCREENING CRITERIA: At a minimum, every project was required to meet the following three requirements: (1) **consistency** with the Long Range Plan, local land use

management, the plans of adjacent jurisdictions, and the ISTEA mandated factors; (2) **financial "reasonableness"**; and (3) **project specific** eligibility and justifications.

1) **Consistency Requirements**

A) Each proposed project was required to be consistent with the RTP. At present, the RTP consists of a *Major Facilities Plan* (December 1990) and supplemental priorities and details provided in the Draft *Ten-Year Capacity and Mobility Plan* (August, 1990) and specific sub-area and corridor studies. Major projects with system-level impacts were not considered for TIP programming unless they were a recommended action from the regional analysis or a sub-area or corridor study.

In future TIP cycles, all capacity increasing projects will be required to be consistent with the CMS component of the Long Range Plan mandated by ISTEA. Following the "Interim Guidance" from the U.S. Department of Transportation, until regulations regarding the development of the CMS are issued, the existing planning certification used by CDTC will suffice, if supplemented by a project-level National Environmental Policy Act (NEPA) analysis which includes full examination of alternative operational strategies.

B) Each proposed project was required to be consistent/complimentary with the facility (or proposed facility) in the adjacent jurisdiction if the project was near or crosses a jurisdictional boundary. The existing Section 239 (l) and (m) process could help to document interjurisdictional coordination.

C) Fixed capacity improvements were required to be linked to local land use management. Because the effectiveness of existing facilities must be maximized, a plan or commitment to access management, construction of new local streets or provision of supplemental transit services should be in place prior to major capacity work.

D) All projects were required to be consistent with community desires as documented in local land use plans or other policy documents, at public meetings, or through other applicable means.

E) ISTEA established fifteen factors that were required to be considered in the development of the TIP. All projects were required to address at least one of these factors, as listed below:

1) Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently;

2) The consistency of transportation planning with applicable Federal, State, and local energy conservation programs, goals, and objectives;
3) The need to relieve congestion and prevent congestion from occurring where it does not yet occur;
4) The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and projects with the provisions of all applicable short and long term land use and development plans;
5) The programming of expenditure on transportation enhancement activities as required in section 133, which defines transportation enhancement activities for the purpose of funding under STP as "the provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, facilities and canals, preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff.";
6) The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such projects are publicly funded;
7) International border crossings and access to ports, airports, intermodal facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations;
8) The need for connectivity of roads within the metropolitan are with roads outside the metropolitan area;
9) The transportation needs identified through the use of the management systems required by section 303 of title 23;
10) The preservation of right-of-way for construction of future transportation projects, including identification of unused rights-of-way that may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss;
11) Methods to enhance the efficient movement of freight;
12) The use of life cycle costs in the design and engineering of bridges, tunnels, or pavement;
13) The overall social economic, energy, and environmental effects of transportation decisions;
14) Methods to expand and enhance transit services and to increase the use of such services;
15) Capital investments that would result in increased security in transit systems.

In addition, safety was an important factor that transportation projects proposed for funding in the TIP should address. How the TIP as a whole addresses these 15 factors is found on page 83.

2) **Financial Requirements**

A) Reasonable cost estimates were required to be able to be developed for all projects. These cost estimates were derived from commonly accepted practices, such as the CDTC Generic Project Cost Estimation or the NYSDOT Initial Project Proposal (IPP) procedures. This meant that the scope of the preferred alternative had to be sufficiently defined to be able to estimate right-of-way needs and other major project costs (e.g. will structures be needed or not?). This did not mean that preliminary engineering was required to be completed prior to programming.

B) Project information provided by the project sponsor was required to include a plan for full project funding. All fund sources were not required to be "in hand", but should be expected to be in place by the year of programming. Specifically, the issue of the provision of the required 20% local match share was directly addressed, preferably with a resolution of intent to fund. Public/private financing possibilities were addressed, if applicable. Transit operators are required by FTA to document financial capacity in the adopted TIP. All facilities that require an ongoing operating budget to be useful were required to demonstrate that such financial capacity exists.

3) **Project Specific Requirements**

A) All projects were required to be well defined. Project limits, the intended scope of work, and the project concept were required to be clear. Planning projects to further define longer range federally eligible projects, preliminary engineering, and right-of-way were acceptable project phases, provided that the other screening requirements have been met for the project as a whole. Phases of larger construction projects were requested to, if possible, be usable segments that will provide benefit to the traveller.

B) All projects were required to be justified based on meeting an identified transportation system need.

Bridge projects were required to meet NYSDOT criteria for a deficient bridge. This included the following two conditions:

1) CONDITION RATING; The current Federal Sufficiency rating must be less than "50.0", and either (B), (C), or (D) applies;

   (B) State Condition Rating must be less than 3.5 by 1998, based on the current rating deteriorated at a rate of 0.1 points per year from the date of last inspection to 1998; or

   (C) Structure has one or more primary (critical) structural features [Defined as (1) Beginning and ending abutment rating, (2) Pier rating (net), (3) Beginning and ending abutment erosion rating, (4) Primary member rating (net), (5) Pier erosion rating (net), where the net rating is the lowest value of all the similar elements rated; e.g. a bridge with two piers, one with a rating of "3" and one with a "4", would have a net pier rating of "3".] rate "2" or less, based on its last inspection, or

   (D) The municipality can demonstrate some deficiency not covered in (B) or (C) which makes major rehabilitation or replacement mandatory within 5 years.

2) APPROACH WORK (Includes any realignment, reconstruction or resurfacing beyond the approach slabs (if any) to the structure. Features such as vertical and horizontal sight distances, curves, grades, intersection approaches adjacent to the structure will be evaluated. A detailed cost estimate is not expected; rather a qualitative assessment will be made.) should not exceed 25% of the structure cost, or total cost of structure and approaches using federal-aid should not exceed twice the cost if the project were done with state or local funds.

Pavement rehabilitation projects, with the exception of those functionally classified as principal arterials, were required to be rated at **5 or below** (poor) using NYSDOT Pavement Management System (PMS), or a comparable "poor" rating by another PMS. Principal arterials, in recognition of their higher function, were required to be rated at 7 or below (good) using the NYSDOT PMS.

Mobility projects needed to address a **Level of Service of E or below**, either under current conditions or projected conditions in the year of programming in order to be evaluated further.

Project justifications for all projects were the basis for the evaluation of project merit. Wherever possible, this justification included the results of existing management systems or other performance based standards. Project sponsors were made aware that in future TIP cycles, a management system basis may be required.

C) To be programmed in the 1993-98 TIP, projects or project phases as defined above were required to be able to be implemented by FY 1997-98.

D) All projects were determined to be eligible for either the STP or CMAQ program. Many types of projects are eligible for STP funds including:

* Highway (limited access facilities)
  - Construction
  - Reconstruction
  - Resurfacing
  - Restoration
  - Operational Improvements
  - Safety improvements and programs
  - Research and development and technology transfers
* Bridges
  - Construction
  - Reconstruction, including seismic retrofit
  - Resurfacing
  - Restoration
* Transit
  - Anything eligible for FTA funding, including fixed guideways, vehicles, maintenance facilities. Federal regulations prohibit the use of STP funds for ongoing operating expenses.
  - Safety improvements and programs
  - Research and development and technology transfers
* Streets and Roads (conventional facilities), functionally classified as urban collectors or above, or, in rural areas, major collectors or above. All old FAU/FAS routes are grandfathered.
  - Signalizations and signal timing
  - Restriping
  - Resurfacing
  - Bus turnouts
  - Construction
* Carpool projects
* Park and Ride lots
* Bicycle and pedestrian projects
* Traffic monitoring, management and control facilities and programs

- Capital
- Operating

* Planning programs
* Enhancement activities, defined by Section 133 of ISTEA as the provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, facilities and canals, preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff;
* Transportation Control Measures
* Development and establishment of management systems
* Wetlands mitigation

According to the ISTEA and additional guidance made available by the FHWA eligibility for CMAQ funds is restricted to:

* Projects in the adopted State Implementation Plan (SIP): As a marginal nonattainment area, the Capital District has no projects listed in the current SIP.
* Specific Transportation Control Measures (TCMs) listed in the Clean air Act Amendments of 1990, Section 108:
  (b)(1)(A)(i) programs for improved public transit;
  (ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;
  (iii) employer-based transportation management plans, including incentives;
  (iv) trip reduction ordinances;
  (v) traffic flow improvement programs that achieve emission reductions;
  (vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service;
  (vii) programs to limit or restrict vehicle use in downtown area or other areas of emission concentration particularly during periods of peak use;
  (viii) programs for the provision of all forms of high-occupancy, shared-ride services;

(ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;

(x) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;

(xi) programs to control extended idling of vehicles;

(xii) EXCLUDED BY ISTEA: ~~programs to reduce motor vehicle emissions, consistent with Title II, which are caused by extreme cold-start conditions;~~

(xiii) employer-sponsored programs to permit flexible work schedules;

(xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;

(xv) programs for new construction and major reconstruction of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For the purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and

(xvi) EXCLUDED BY ISTEA: ~~programs to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light-duty trucks.~~

* developing and establishing management systems for traffic congestion, public transportation facilities and equipment, and intermodal transportation facilities and systems demonstrably contributing to attainment;
* capital and operating cost of traffic monitoring, management, and control facilities and programs demonstrably contributing to attainment;
* and the construction of bicycle and pedestrian facilities.

MERIT EVALUATION CRITERIA AND TECHNIQUES: Every project that met the minimum screening requirements was fairly evaluated. Following ISTEA mandates, life cycle costs and the use of performance based standards were an integral part of the merit evaluation. The merit evaluation procedure used the best available information from CDTC's models, from corridor studies, and from the project sponsor. Wherever possible, measures that cut across modes, such as relative cost effectiveness, were used. The qualitative aspects of projects were directly incorporated into the merit evaluation procedure.

The data required for project analysis is outlined below. In some cases, a considerable amount of quantitative data on current conditions and the effects of project implementation were available. In other cases, this was not the case. Clear project descriptions and complete project justifications were essential for the merit evaluation to occur on a fair basis for all project types.

Project merit evaluations were presented using a common format, as shown in the "Sample Project Evaluation Fact Sheet" on page 54. This procedure is very similar to the *Project Information Procedure* (PIP) used by CDTC in past years, with significant modifications to take into account new project eligibilities and the broadened focus provided by the ISTEA, the Clean Air Act amendments of 1990, and the ADA. All projects were subject to analysis using the same criteria, but the relative emphasis of the different criteria varied by project type, as outlined below. The following project types were identified for the purpose of analysis:

* Congestion Mitigation and Air Quality (CMAQ) projects;
* Mobility projects;
* Infrastructure projects;
* Safety projects;
* Planning studies;
* "Enhancement" projects; and
* Economic Development projects.

Data Requirements: The following inputs are necessary for the project merit evaluation (key information provided by the project sponsor is in bold):

Project description and scope, including location, project length, structures included;

Project justification and objective (purpose);

The CDTC Cost Estimation procedure, developed by NYSDOT is followed using the stated project description to estimate costs of all roadway projects. All other project types require a cost estimate using commonly accepted practices, provided by the project sponsor.;

Proposed year of construction and project phasing, if applicable;

Current conditions -- Average Daily Traffic (including the year of the data), pavement or bridge condition and documentation of the system used to evaluate that condition, current signal system, intersection configuration, level of service, percent trucks, accidents, current bike lanes, bus stops and/or sidewalks;

Projected conditions -- Traffic Volumes, Level of service, percent trucks, accidents;

Service Life of the project. CDTC will use standard table if data not provided;

Functional classification of facility, inclusion on bicycle facilities plan;

If Park and Ride lot, number of spaces and expected use;
If other project type, CDTC worked with project sponsor to determine **appropriate inputs** for analysis;
Any information pertinent to the qualitative criteria outlined below; and.
Type of environmental document required under SEQR.

Simplifying assumptions regarding benefits in the peak period, diversions due to the project, operating cost reductions (from standard NYSDOT user cost tables), and the distribution of benefits over the life of the project were used, in some cases. Current and projected conditions were available for most projects from CDTC's RTP and Subarea study model runs.

Measures That Were Examined: The following measures were calculated or described, as the case may be, for each candidate project for the 1993-98 TIP.

Transportation System and User Savings: (A Technical Appendix that elaborates the calculation of each of these measures is available upon request.) There are four components to system and user savings, namely:

Safety Benefits, measured in the dollar value of the projected reduction in accidents per year. Safety benefits are the product of the average annual accidents, the expected percent reduction in accidents as a result of the improvement, a travel adjustment factor based on changes in traffic expected, and a monetary equivalence factor from a standardized table developed by NYSDOT.

Travel Time Savings, measured in the dollar value of the projected time saved by implementation of the project per year. Travel Time Savings is the product of the change in total delay per year (based on delay per vehicle per day, the daily volume and the number of days in a year when the condition exists) a monetary equivalence factor and the relative need priority to give extra weight to savings in congested areas.

Energy and User Cost Savings, measured in the dollar value of the projected energy and user cost saved per year. Energy cost is the product of the daily change in operating fuel consumption (based on the FHWA-supported microcomputer procedures in most cases), the daily volume, the number of weekdays in a year, and a monetary equivalence factor from a standardized table. The maintenance cost savings is derived from a standard table.

Life Cycle Cost Savings, measured in the dollar value of the projected time saved per year by deferring abandonment of the facility. Life cycle cost savings are a product of the extended life of the facility, and the mobility benefits that result from keeping the facility usable.

A Total Benefit/Cost ratio was calculated based on these project benefits and the annualized cost of the project.

Congestion Relief: Congestion relief was measured as the daily excess vehicle hours of delay saved. This measure was divided by both the annualized cost and the total cost to provide a measure of comparability between projects. (A Technical Appendix that elaborates the calculation of this measure is available upon request.)

Air Quality: The hydrocarbon emissions reductions for each project considered for CMAQ was calculated using NYSDOT methodology. Because the primary air pollution concern in the Capital District is with ozone precursors, this was the focus of the analysis. The cost effectiveness of the hydrocarbon emissions benefit was also calculated. If applicable, a similar analysis was done for non-CMAQ mobility projects and the results recorded here.

Noise Reduction: The merit of the project related to noise reduction was a function of both the perception of noise as a current problem in the project area and a determination of whether the project would significantly reduce noise levels.

Residential Traffic: The merit of the project related to the impact on residential traffic depended on both the perception of current traffic levels as a problem and the impact of the project on traffic through residential areas.

Community and Ecological Disruption: Community disruption parameters included land consumption (the need for right-of-way acquisition), intrusion on sensitive lands (wetlands, woodlands, parklands, aquifers, historical property), and residential and business displacement. It also included such things as the removal of billboards, inclusion of scenic easements, and archaeological considerations, where applicable.

Access to the Public Transportation System: Access to the public transportation system included bicycle and pedestrian access and access for persons with disabilities. Projects which will decrease the current level of access, such as intersection improvements that eliminate a bus stop, were noted, as well as projects that decreased future access opportunities. The relationship of the project to the implementation of the ADA was highlighted.

Modal Integration: Modal integration is the extent to which the project makes the transportation system as a whole work better, particularly the transfer across modes. Intersection projects that took into account bus routing and pedestrian/bicycle actuation, for example, were highlighted under this criterion.

Provision of Alternative Modes: The provision of alternative modes within the project (e.g. bike path, improved bus facilities, bike lockers at a park and ride lot), or the

accommodation of alternative modes (e.g. inclusion of pedestrian actuation in a signal project), were noted.

System Linkage: System linkage addressed the project's geographic and intermodal aspects. The emphasis of the analysis was on whether or not the project addressed a critical link in the transportation system (e.g., Rexford Bridge) or provided a new linkage not previously provided (e.g. an intermodal transfer or new suburban transit service). The purpose of including this criterion was to focus on the system impacts of the project.

Economic Development: The dependence of economic development plans on the implementation of the project were noted. Quantification of measures such as job creation/retention, increases in taxes collected, expansion in secondary services, and the enticement for additional enterprise were also desirable. The impact of the project on achieving the region's adopted economic development goals (see programming criteria/principles on page 46) was the focus.

Other: A category for other project considerations was included in order to be able to discuss any significant factors not covered above.

Measures Emphasized for Each Project Type:

Congestion Mitigation and Air Quality (CMAQ) projects: All projects eligible for CMAQ were identified as such. The measures emphasized by CDTC were based on the selection criteria established by NYSDOT, and included emissions benefits and cost effectiveness. Projects that were not selected for inclusion in the TIP in the CMAQ program were referred to other project categories for further examination as candidates for the STP program without prejudice.

Mobility projects: Mobility projects included all projects that increase the functional capacity of the transportation system. This included capacity-increasing road projects, operational strategies to increase system efficiency, transit projects, and demand management projects. The emphasis in merit evaluation for mobility projects was on the travel time saved and energy/user cost calculations, as well as the overall benefit/cost ratio.

Infrastructure projects: Infrastructure projects are those projects that address pavement, bridge, or transit rehabilitation and replacement needs without materially increasing the functional capacity of the system. The emphasis in merit evaluation for infrastructure projects was on the life cycle benefits of doing the improvements, as well as the overall benefit/cost ratio.

Safety projects: Safety projects are those projects whose primary purpose is to increase the safety of the transportation system by either reducing accidents or improving security. The

emphasis in evaluating the merit of safety projects was on accident reduction, as well as the overall benefit/cost ratio.

Planning studies: Planning studies were primarily evaluated according to their relationship to the implementation of RTP goals and objectives. The overall benefit/cost ratio, if available, was also used.

"Enhancement" projects: Enhancement projects, as defined by ISTEA (see screening criteria on page 34) are eligible for the STP and some may be eligible for the CMAQ program. Additionally, there is a set-aside within the STP at the state level, administered by NYSDOT, specifically for enhancement projects. CDTC's programming principles refer enhancement projects to the state process as a first step and the merit evaluation for the 1993 TIP cycle was deferred until the state guidelines are set. Proposals beyond the 10% set-aside will be entertained in the next annual TIP cycle, after there is a better sense of the state-wide priorities and whether or not the dedicated set-aside is sufficient to fund the breadth of proposed enhancement projects.

Economic Development projects: Economic development projects are those transportation projects where a primary purpose is to promote economic development. Generally, these projects are so critical to commerce within an entire region or multi-county area and so vitally important to the economic well-being of regional industries that, by their very nature, the projects will have major impact on the retention or creation of jobs in the region. This includes infrastructure needed for certain hubs or centers of commerce essential for the movement of goods to and from a region, such as airports, intermodal transportation centers, and regional markets and distribution centers. Such projects were evaluated according to an analysis of the benefits accrued from the project. Benefits that may be able to be quantified include job creation, job preservation, improved efficiency, increases in economic activity (e.g., square feet of commercial space), or increased capacity for intermodal transfers. The emphasis in merit evaluation of economic development projects was their potential to stimulate economic development.

Projects that fit into more than one category: Projects that fit into more than one of the above categories were evaluated using all relevant criteria. The emphasis in establishing overall merit depended upon the stated objectives of the project.

PROGRAMMING CRITERIA/PRINCIPLES: The goal of CDTC is to produce a "balanced" TIP that contributes to a staged regional plan for maintenance of essential facilities and services, demand management and capacity improvements. Federal regulations state that *"Procedures or agreements that distribute suballocated STP or Section 9 funds to individual jurisdictions or modes within the metropolitan area by predetermined percentages or formulas are inconsistent with the ISTEA provisions that require MPOs in cooperation with the State and transit operators to develop a prioritized and financially reasonable TIP unless they can be clearly shown to be based on*

considerations required to be addressed as part of the planning process. Such procedures and agreements otherwise ignore the dynamics of the planning process, hinder response to the high priority problems identified through the planning process, and frustrate the flexibility features of the ISTEA." The CDTC approach meets both the letter and spirit of federal regulations by allowing CDTC to look at the array of projects and their relative merit, and to establish a program that best implements the range of goals included in the RTP. The following criteria/principles are intended to produce the best possible program of projects to benefit the Capital District transportation system, regardless of mode.

Merit: The project merit evaluation outlined above was the principal criterion used to determine the relative value of proposed projects to the metropolitan transportation system as a whole.

Regional Goals: The CDTC TIP makes progress in meeting the goals and objectives of the RTP. The goal statements from the RTP are repeated below:

> **Social Goals of the Transportation System** -- to facilitate and encourage the provision of safe, healthful, pleasant, equitable, and diverse residential opportunities in a manner consistent with existing development and development capabilities of each community, and facilitate and encourage provision of adequate economic, educational, cultural, recreational and health care opportunities to all residents.
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> **Economic Goals of the Transportation System** -- to facilitate and encourage personal and community economic development, including balanced and sustained growth in the Region's economy; encourage efficient use of land necessary for commercial, industrial, and institutional purposes, appropriately locating and developing major activity sectors; and encourage effective management of resources available for public utilities and services.
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> **Environmental Goals of the Transportation System** -- to facilitate and encourage use of land in a manner consistent with its natural characteristic and surrounding land uses, preserving sites of ecological, geological, and historic value; and improve, protect and conserve air, water, land and energy resources in all activities.

Mobility: Current Metropolitan Area congestion in the Capital District, as shown in CDTC's STEP model, are summarized in Table C on page 52. The draft *Ten-Year Capacity and Mobility Plan* published in August of 1990 states a tentative goal of a year 2000 set of conditions that average no more than 1.0 vehicle hours of excess delay in the PM peak hour per 1,000 vehicle miles of travel for the federal-aid system (includes both state and local roads). This draft plan found that a combination of strategies, including incremental capacity improvements, increased transit service and demand management

actions, were cost effective methods of achieving this goal. This goal compares with the NYSDOT goal to maximize reduction of projected vehicle hours of delay at LOS "E" or "F" (excess vehicle hours of delay or XVHD) on state highways. CDTC and NYSDOT have established that a mixed strategy is the most effective means of addressing increased congestion levels and improving mobility. The TIP was formulated to include a balance of projects that, in combination, would provide the maximum congestion relief and mobility improvement.

Pavement: NYSDOT has set year 2000 goals of no more than 10% poor state pavement. Poor pavement is defined as having a rating of "5" or below in the PMS ratings. Currently 13.0% of state facilities are in poor condition in Region 1. Non-state federal-aid facilities currently have 19.0% of poor pavement in the four CDTC counties. The current status of Capital District roads is summarized in the Table D on page 53.

CDTC did not establish a goal for non-state facilities with pavement in poor condition. CDTC followed a programming philosophy that balanced projects by type and provided for progress in addressing pavements in poor condition.

Bridges: NYSDOT has established year 2000 goals of no more than 20% deficient state bridges and 39% deficient local bridges state-wide. Currently there are 37.5% deficient state bridges and 55.0% deficient local bridges state-wide. The status of bridges in the Capital District is summarized in Table E on page 53. In addition, NYSDOT has established a Bridge Management System that is able to incorporate life cycle costs into its bridge evaluations. CDTC also used life cycle considerations in its merit evaluation of infrastructure projects. CDTC endorsed the adopted state goals for bridges and considered these goals in the development of the TIP.

Transit: Transit infrastructure deficiencies are defined as the percentage of facilities or vehicles that are beyond their useful life. CDTA currently has 0% deficiencies in its fleet. However, a major bus replacement is scheduled starting in 1994 with FTA Section 9 funds, and the staggering of this replacement means that in 1996, 1997 and 1998, 70 out of 227 or 31% and 30 out of 227 or 13%, and 15 out of 227 or 7% of the fleet, respectively, will be deficient until the purchase is complete. Upstate Transit currently has no projected deficiencies in its fleet, due in large part to the 13 bus procurement in the 1992 TIP. Data for other private transit operators in the Capital District is unknown. CDTC's past practice has been the maintenance of 0% deficiencies in the transit fleet and considered this in the development of the TIP, in conjunction with FTA Section 9 formula and Section 3 discretionary funded purchases.

"Enhancement" projects and Other Project Types: Enhancement projects are eligible for the STP and may be eligible for the CMAQ program. Additionally, there is a set-aside within the STP at the state level, administered by NYSDOT, specifically for enhancement projects which amounts to $30 million for Upstate New York for the next five years. This

program was just getting started, with applications and program guidelines scheduled for release by January 1993. Following the principle of maximizing the transportation funding coming to the Capital District, enhancement projects were directed to first apply to the state STP Enhancement program for funding. Proposals beyond the 10% set-aside will be entertained in the next annual TIP cycle, after there is a better sense of the state-wide priorities, and whether or not the dedicated set-aside is sufficient to fund the proposed enhancement projects.

Deficiencies in non-traditional project types not part of the enhancement set-aside (e.g. intermodal facilities and planning studies) were much harder to define. Lack of experience and data in these areas hampered CDTC's ability to estimate the extent and nature of these deficiencies. CDTC used the best available data and project justifications to ascertain a given project's ability to address deficiencies in the transportation system.

Program Balance: The balance between mobility, infrastructure, and other project types in the final program was based on a goal of making "reasonable" progress in each of these areas. The definition of reasonable was dependent, in part, upon the mix and quality of projects that was on the table for consideration. As stated above, the merit evaluation procedure provided the principal means of determining the relative caliber of projects. Table F, on page 55, illustrates the progress towards meeting these goals with the new projects added to the TIP.

Geographic Distribution: The STP and CMAQ programs have minimal requirements for geographic distribution of funding. In fact, federal regulations specifically state that geographic formula distribution of STP funds is inconsistent with the intent of the ISTEA. Therefore, considerations of geographic equity must stem from considerations addressed in the planning process. CDTC based its programming decisions upon relative project merit and the balanced attainment of progress towards long range goals -- not on geographic considerations apart from the RTP. CDTC sought a geographic balance in the program and gave consideration to projects with regional benefits.

Other Fund Sources: The likelihood of the project being funded through other sources was considered during programming. A goal of the TIP was to maximize the transportation funding from all sources, public and private, in the Capital District.

Balance With Revenues: Project readiness (ability to obligate funds in year of programming) was considered in establishing the TIP. The TIP was balanced over the 1993-98 time period with estimates of available revenues. Project sponsors were made aware that revenue forecasts showed the majority of funding available in 1997 and 1998.

Commitments Beyond Five Years: An emphasis on implementation of the long range plan goals and objectives should not lead to a program that creates larger future funding commitments than funds can reasonably be expected to be available. This is consistent

with, and a reflection of, ISTEA Section 134 (h)(5), which states that *"The program shall include a project, or an identified phase of a project, only if full funding can reasonably be anticipated to be available for the project within the time period contemplated for completion of the project."*

Air Quality Improvement Emphasis: The TIP emphasized those projects with the greatest projected emissions reductions. New initiatives to reach attainment and to maintain that status, even though emission reductions were difficult to estimate, were given consideration for programming.

Multimodal Solutions: Programming consideration was given to projects that demonstrated multimodal solutions.

Americans with Disabilities Act (ADA) Emphasis: Programming consideration was given to projects that demonstrably contributed to the implementation of the ADA.

CDTC's FTA Section 9 Project Selection Process

CDTA is primarily responsible for submitting the requests to CDTC for transit related funded projects. In general, all projects which concern transit operating assistance, equipment and support facilities, and do not deal directly with the highway system are classified as transit projects. Unlike the project selection process for flexible funds described above, the procedure used to select projects to be funded with dedicated transit revenues for inclusion in CDTC's TIP is somewhat less rigorous, particularly with respect to the information concerning the need and benefits of public transit projects.

As outlined by CDTA, candidate capital projects are identified through transit improvement studies and evaluations of fleet and other capital requirements. As the anticipated needs become apparent and funding appears to be reasonably available, the various projects recommended by these studies are evaluated. The evaluation principally follows a qualitative approach and is based on a set of transit development goals and supporting objectives established as part of CDTA's Capital Planning Process. Those transit projects which would provide the greatest benefit and/or meet the most urgent needs of the community are then initiated and are recommended for inclusion in the TIP. The final decisions regarding project inclusion in the program are made by CDTC on a recommendation from the Planning Committee.

A transit information procedure provides a mechanism by which information generated under CDTA's and NYSDOT's capital planning process can be formally presented to CDTC's Planning and Policy Committees for review and approval. The procedure supplies project information in narrative form to the Planning Committee which can then make informed decisions, especially when projects compete with CDTA projects. It is

intended that the procedure would be applied to new transit projects -- those projects not included in the TIP.

In addition, CDTA maintains a short-range transit capital plan which identifies a series of actions and strategies that provide the basis for coordinating and prioritizing CDTA transit capital improvements. The TIP follows directly from the plan and generally is a simple project listing.

Together, these two planning efforts help to provide a sound basis for a documented, objective, straight forward process for TIP transit project selection. In addition, they make the transit element of the TIP a useful budgetary tool to determine region-wide transit capital needs and priorities as a basis for supporting new funding legislation as well as projecting capital and operating needs for future funding consideration.

Private Sector Participation in the Transit TIP Process

Projects proposed by private operators are also entertained under CDTC's TIP process, in accordance with CDTC's *Private Operators Policy*, adopted on February 19, 1987. For these projects, public sponsorship is a prerequisite for receiving federal or state financial assistance. Programming of funds by CDTC is based on the priority of the service need and on integration of the service into the regional transit system. CDTC's *Private Operators Policy* also identifies a set of policies and evaluation criteria with which to review private operators proposes. Involvement in the planning process is encouraged through routine notification of private operators concerning the development of the TIP.

Integration of Infrastructure Maintenance Concerns in CDTC's TIP Project Selection Process

CDTC's TIP is developed with the recognition that the investment in existing highways and bridges must be protected through responsible maintenance and rehabilitation programs.

Currently, infrastructure concerns are incorporated into TIP development in several ways. First, the TIP is coordinated with the NYSDOT Goal-Oriented Capital Program which has a major emphasis on pavement and bridge conditions. Second, the project evaluation methodology includes analysis of the need and priority of infrastructure work on heavily-travelled facilities with low highway or bridge structural ratings. The methodology includes estimates of user cost benefits attributable to infrastructure repair. Candidate TIP projects are identified from CDTC's highway condition scoring efforts and NYSDOT highway and bridge condition scoring work.

Additionally, CDTC's current regional issues investigation has concentrated upon identifying the magnitude of infrastructure needs over the next 30 years. From this information options concerning the funding of infrastructure work are being examined. The results of this work will be incorporated into CDTC's long-range transportation plan and will provide direction to continued TIP updates.

TABLE C

Metropolitan Area Congestion
(Peak Hour Excess VHD/1000 VMT)

	1990	2000 with 1992-97 TIP Network
Albany	1.6	3.6
Rensselaer	0.4	0.9
Saratoga	0.5	1.3
Schenectady	1.4	2.8

Metropolitan Area Congestion (1990)

	Peak Hour VMT	Daily Excess VHD
Principal Arterial State	941,600	1770
Principal Arterial Non-State	101,400	1003
Federal Aid Balance State	149,700	96
Federal Aid Balance Non-State	257,600	865
Total State	1,199,200 (77%)	1866 (50%)
Total Non-State	359,000 (23%)	1868 (50%)

TABLE D

Current Pavement Conditions By County, By Facility Type

COUNTY	% POOR STATE	% POOR NON-STATE
Albany	14.26%	14.0%
Saratoga	11.24%	24.0%
Schenectady	13.63%	14.0%
Rensselaer	19.55%	29.0%
REGION 1 TOTAL	13.05%	19.0% (CDTC only)

TABLE E

Deficient Bridges By County and Facility Type

COUNTY	% DEFICIENT STATE BRIDGES	% DEFICIENT NON-STATE BRIDGES *
Albany	95/232 (41%)	36/86 (42%)
Rensselaer	43/106 (41%)	78/132 (59%)
Saratoga	62/102 (61%)	56/111 (50%)
Schenectady	21/77 (27%)	10/24 (42%)
REGION 1 TOTAL	360/832 (43%)	415/806 (51%)

** Does not include railroad or "other" bridges.*

SAMPLE PROJECT EVALUATION FACT SHEET

PROJECT TITLE _____
LOCATION _____
DESCRIPTION _____
PURPOSE _____

1993-98 PROJECT COST (Federal Share) ($M) _____
POST 1997-98 COST _____
ANNUALIZED COST ($1000/yr) _____

TRANSPORTATION SYSTEM AND USER SAVINGS
Total System and User Savings ($1000/yr) _____
- Safety Benefits ($1000/yr) _____
- Travel Time Savings ($1000/yr) _____
- Energy and User Cost Savings ($1000/yr) _____
- Life Cycle Cost Savings ($1000/yr) _____

Benefit/Cost Ratio _____

CONGESTION RELIEF
Daily Excess Vehicle Hours of Delay Saved _____
Daily Excess Vehicle Hours Saved / $ M annual (/ $M initial) _____ ( )

AIR QUALITY
Hydrocarbon Emission Reductions _____
Hydrocarbon Emission Reductions / $ M annual (/ $M initial) _____ ( )

NOISE REDUCTION:

RESIDENTIAL TRAFFIC:

COMMUNITY AND ECOLOGICAL DISRUPTION:

ACCESS TO THE PUBLIC TRANSPORTATION SYSTEM:

MODAL INTEGRATION:

PROVISION OF ALTERNATIVE MODES:

SYSTEM LINKAGE:

ECONOMIC DEVELOPMENT:

OTHER:

TABLE F

Progress Towards Meeting the Goals Included in the 1993-98 TIP Programming Principles

The programming principles included in the Capital District Transportation Committee's 1993-98 TIP Process and Criteria state that CDTC will try to make "reasonable progress" in meeting various goals established in the *Regional Transportation Plan* (RTP). This Table illustrates the progress towards meeting these goals that would result from implementing the 1993-98 TIP projects. All costs are in current dollars.

	Current Conditions	Goal	Cost of Committed Projects.	Additional Required to Meet Goal	Value of New Projects
State Pavement	13% poor (1)	10% poor (2)	$64 M (3)	$46 M (4)	$15 M (5)
Local Federal Aid Pavement	19% poor (6)	10% poor (7)	$10 M (8)	$50 - 270 M (9)	$23 M(10)
State Bridges	43% poor (11)	20% poor (12)	$223 M (13)	$15 M (14)	$12 M(15)
Local Bridges	51% poor (16)	39% poor (17)	$46 M (18)	$UNKNOWN M (19)	$5 M(20)
Transit Infrastructure	0% deficient (21)	0% deficient (22)	$40 M (23)	$16 M (24)	$16 M(25)
Mobility	1.1 XVHD/VMT (26)	1.1 XVHD/VMT (27)	$127 M (28)	$369 M (29)	$58 M(30)
Totals			$510 M (31)	$496 - ? M (31)	$129 M (31)

Notes:

1. 1992 conditions of state highways per 100% NYSDOT survey.
2. Established NYSDOT program goal.
3. Value of projects in NYSDOT proposed five-year program, not counting STP and NHS proposals and contingent State Dedicated Fund (SDF) candidates. Does not include pavement and bridge costs incidental to major mobility projects.
4. Based upon NYSDOT Region 1 statement that full funding of federal aid proposals and SDF candidates would attain goal.
5. Sum of all new NHS and STP and contingent SDF projects included in the 1993-98 TIP.
6. 1991 conditions of local federal aid roads per CDTC 100% survey.
7. Ten-year goal. CDTC has no formal goal for local pavement condition.
8. Value of TIP projects. CDTC estimated local effort not shown in TIP ($5.5 million annually).
9. Estimated using CDTC's Highway Condition Prediction Model, local and state unit costs, and known deterioration rates. Lower end of range reflects treatment at local costs and lower standards (unit costs approximately halfway between costs of non federal-aid roads and those of state projects). Upper end of range reflects full costs of meeting standards. Cost of meeting standards is estimated by assuming that all resurfacing and reconstruction

projects warranted would have scopes essentially identical to reconstructions at state project costs. Value represents five-year portion of the cost of achieving goal by 2003.

10. Sum of all new NHS and STP pavement projects off the state system included in the 1993-98 TIP.
11. 1992 conditions per continuing NYSDOT scoring process.
12. Established NYSDOT program goal.
13. Value of projects in NYSDOT proposed five-year program, including proposed HBRR program. Does not include value of STP, NHS or contingent SDF projects.
14. Based upon NYSDOT Region 1 statement that full funding of federal aid proposals and SDF candidates would attain goal.
15. Sum of new STP, NHS and contingent SDF projects included in the 1993-98 TIP.
16. 1992 conditions per continuing NYSDOT scoring process.
17. Established NYSDOT program goal.
18. Value of projects in NYSDOT proposed five-year program, including proposed HBRR projects on local facilities.
19. Bridge goal attainment is strongly linked to maintenance. The amount of money required to meet the local bridge goals is unknown because of the wide variety of maintenance programs undertaken by local government. In general, there is a tendency to allow local bridges to deteriorate to the point of extensive rehabilitation or replacement in lieu of maintenance.
20. Sum of new STP and NHS projects included in the 1993-98 TIP.
21. Current percentage of CDTA and Upstate Transit fleet and facilities that are deficient. A small amount of over-age equipment may be operated by other private transit operators.
22. CDTC's historic commitment to transit has been to support replacement at the earliest eligible dates.
23. Value of existing (1992-97) TIP projects. $11 million in Section 3 funds was assumed.
24. Additional investment required to meet goal by the end of five years. Intermediate conditions would reflect non-attainment of goal. Increased unit costs for bus purchases, inflation, and a changing set of vehicle replacement schedule explain this increased need from the previous program.
25. Candidate projects would require additional Section 3 discretionary grants or allocations from the SDF..
26. Excess vehicle hours of delay per 1,000 vehicle miles of travel in the peak hour. Based upon revised CDTC STEP model calculations for 1990 conditions.
27. The working mobility goal for CDTC's *Ten-Year Capacity and Mobility Plan* is to keep future congestion levels at levels no worse than evident in 1990.
28. Sum of highway capacity, system management, transit and demand management projects currently on the TIP. Includes federal "demonstration" projects (Exit 26 bridge and I-90 Exit 8 connector.)
29. Updated estimate of the cost (in current dollars) of projects in CDTC's *Ten-Year Capacity and Mobility Plan.* Includes $32 million for full ATMS implementation and $51 million as five-year equivalent of full-scope TDM incentive program. ($25.4 million tentatively committed from CMAQ program toward this amount.) Achieves goal by 2000.
30. Sum of new highway capacity, system management, additional transit service and demand management projects on all systems included in the 1993-98 TIP. Includes the cost of incidental pavement and bridge work in conjunction with mobility projects. It is estimated that the investment in mobility projects in the 1993-98 TIP, including post-1998 commitments, will allow the Capital District to achieve 2.1 XVHD/VMT by the year 2000. The major corridor that will still experience congestion is I-87, the Northway.
31. Sum of column, no double-counting.

Maximizing Regional Transportation Investments in the ISTEA Era:

A Guide for Programming ISTEA's Flexible Funds

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Table of Contents

Introduction

The landmark 1991 federal transportation reauthorization legislation, the Intermodal Surface Transportation Efficiency Act (ISTEA), granted metropolitan planning organizations (MPOs) unprecedented latitude in directing funds to those transportation projects judged most beneficial to a region, regardless of mode. Hand in hand with this flexibility came new responsibilities for MPOs to evaluate projects across modes. While no two MPOs are likely to use an identical process in programming ISTEA funds, this workbook is intended to assist MPOs in developing programming processes that are appropriate for their regions.

The workbook is organized into separate chapters for the following four fund sources: the Surface Transportation Program (STP), Transportation Enhancement Activities (TEAs), the Congestion Mitigation and Air Quality Improvement Program (CMAQ), and the Federal Transit Act's Section 9 program. Included in each chapter will be information on eligible project sponsors and projects and a structure for developing a program that emphasizes the incorporation into the evaluation criteria of the 15 factors mandated by ISTEA .

The San Francisco Bay Area's Metropolitan Transportation Commission (MTC) began developing new criteria for evaluating projects shortly after the passage of ISTEA. Their use in recent programming cycles has led to refinements in the process. The documentation of these evaluation criteria, and the lessons learned from their application, was funded by the Federal Highway Administration (FHWA) to monitor and disseminate information on methods used to apply the flexible funding provisions of ISTEA. However, these methods and criteria are not being advocated or recommended by FHWA or other agencies of the US Department of Transportation. They are being provided to interested parties to give information on how agencies have addressed some of the provisions of ISTEA. Further, these criteria were developed prior to release of the US Department of Transportation's Statewide and Metropolitan Planning regulations. Therefore, the most recent concepts on how to better link the planning and programming process to management systems and Major Investment Studies (MIS) are not reflected in the workbook. MTC will be updating its TIP development process during the fall of 1994 to better reflect these planning issues.

Surface Transportation Program[1]

The Surface Transportation Program (STP) constitutes a funding source with a degree of flexibility that had not existed previously. These funds can be used for transit capital projects, bicycle and pedestrian facilities, bridges, and roads, including National Highway System (NHS) roads. However, portions of a state's STP funds must go to earmarked categories: 10 percent to safety programs, 10 percent to transportation enhancement activities, and 50 percent must be divided on a population basis among metropolitan areas. The remaining 30 percent may be allocated by the state to any areas. Rural areas are guaranteed an amount based on their previous Federal Aid Secondary funding.

The Applicability of the MTC TIP Development Process to Other Metropolitan Planning Organizations

In devising a TIP development process for this region's STP funds, MTC had to develop a priority-setting process that could accommodate the region's complex needs and structure. Nine counties, 100 cities, some two dozen transit operators, and over 18,000 miles of highways and roads add up to a diversity of interests not found in most metropolitan planning districts. For this reason, MTC's detailed TIP development process may be particularly useful for other, similarly complex regions. For smaller regions, the basic process framework, but perhaps not the level of detail embodied in the TIP development criteria, may be more appropriate.

Indeed, discussions with staff at other MPOs that are familiar with MTC's process indicate that certain key aspects have wide applicability. MTC's method of involving all interested parties in the development of the screening and scoring criteria has been universally constructive. Equally valuable has been MTC's framework for evaluating projects — the three-step screening, scoring, and programming process with the scoring criteria grouped into four categories: maintaining the Metropolitan Transportation System (MTS), improving the efficiency and effectiveness of the MTS, expanding the MTS, and external impacts. Other MPOs have adapted MTC's framework to local priorities and data availability by replacing MTC's scoring criteria categories with different categories, such as reducing single-occupant vehicle travel, promoting intermodal travel, and long-term cost effectiveness.

MTC's application of the same screening and scoring criteria to both STP and CMAQ funds has proved practical for some MPOs, but not for others. Although this process may appear to add complexity, this approach aids MTC staff in evaluating projects based on their importance to the region rather than their appropriateness for a specific fund source. The programming rules, which are applied after the scoring process, adjust the mix of projects to best leverage available funds. Together, these three steps — screening, scoring, and programming—provide an accessible TIP development process that MPOs may tailor to suit the needs of their regions.

Eligible Project Sponsors

Eligible sponsors include transit operators, cities, counties, ports, airports, air quality

[1]Much of the information in this chapter is based on "Developing a Method of Multimodal Priority Setting for Transportation Projects in the San Francisco Bay Area in Response to the Opportunities in the ISTEA," by Kristina Younger and David Murray. This paper is available from MTC if more detailed information on the development of MTC's criteria is desired.

Eligible Project Sponsors
Eligible sponsors include transit operators, cities, counties, ports, airports, air quality management districts, and public bicycle, pedestrian, and ridesharing agencies.

Project-Eligibility Requirements
From highway construction to wetlands mitigation, a broad range of transportation projects are eligible for STP funds. The types of projects that qualify are listed below.

- Construction, resurfacing, and restoration of highways and bridges.
- Operational improvements, safety improvements and programs, research and development, and technology transfers related to management of highway systems.
- Projects eligible for Federal Transit Administration funding, including capital costs for fixed guideways, vehicles, and maintenance facilities.
- Safety and improvement programs, research and development, and technology transfers for better management of transit systems.
- Signalization and signal timing, restriping, resurfacing, and construction of streets and roads, including creation of bus turnouts.
- Capital and operating expenses for traffic monitoring, monitoring and control facilities, and programs.
- Carpool projects and park-and-ride lots.
- Bicycle and pedestrian projects.
- Enhancement activities (see the Transportation Enhancement Activities chapter).
- Transportation Control Measures.
- Planning programs.
- Development and establishment of management systems.
- Wetlands mitigation.

MTC's TIP Development Process

Cooperative Planning

Consistent with the mandates of ISTEA to provide for participation of all interested parties in the development and approval of transportation plans, MTC initiated the process by asking several of their existing advisory committees, which were largely mode specific, to designate representatives to serve on an Ad-Hoc Committee on Multimodal Priority Setting. At first, the committee included five transit operators, five Congestion Management Agencies — countywide agencies set up by California state law — five city and county representatives, the Bay Area Air Quality Management District, the State Air Resources Board, two sea ports, two airports, California's Department of Transportation (Caltrans), and the Association of Bay Area Governments. This committee later expanded somewhat to include other related parties.

This large, ad-hoc committee had two major subcommittees: one on equity concerns and one to develop the project evaluation process. The face-to-face meeting of committee participants allowed for the free expression of diverse opinions. It also encouraged participants to adopt a regional focus, since a variety of geographic interests were present at the table.

The equity subcommittee met to address fundamental process issues regarding geographic, functional, and modal equity in the distribution of funds. Their recommendations formed the basis for much of the work of the evaluation subcommittee. The equity subcommittee also formulated a four-step appeal process for those project sponsors who felt that they were disenfranchised or treated unfairly in the multimodal priority-setting process. The first two levels of recourse were the Congestion Management Agency (CMA) staff and then its policy board; the next two levels of recourse were the MTC staff and the full Metropolitan Transportation Commission.

The evaluation subcommittee developed the three-step multimodal prioritization process outlined below. During this development, MTC staff reviewed draft prioritization criteria in a variety of forums, including MTC's Minority Citizens and Elderly and Disabled advisory committees, and relayed agency and public feedback to the subcommittee. Details of the adopted criteria are given in Appendix A. Appendix B contains sample applications and two templates: one for scoring projects and one for calculating a cost-effectiveness ratio for roadway projects.

MTC's Three-Step Process

The evaluation subcommittee started with the fifteen factors given in ISTEA (see Table 1) and added three others that were considered essential: implementation of the Federal Clean Air Act, implementation of the Americans With Disabilities Act (ADA), and improved system safety. The 18 factors were then categorized as to whether each would be considered as a screening, scoring, or programming criterion. Projects also had to be consistent with federal guidance and key MTC policy. While MTC has found these factors to be necessary, some MPOs have found these requirements to be overly complicated. Still other regions have incorporated additional factors such as local contribution to project cost, urban area focus, and support of regional growth and economic strategies into their evaluation processes.

1. *Screening criteria for candidate projects:* The first step required that the projects meet ISTEA mandates regarding consistency and financial requirements, follow key MTC policy, and have a reasonable expectation of being built or implemented within a specified schedule. Included among the criteria were compliance with ADA and air quality legislation, conformity with ISTEA's requirement of interregional connectivity, and consistency with state and regional transportation plans. Each screening criteria constituted a threshold. If a project did not pass one criterion, it would be rejected.

2. *Scoring criteria to evaluate projects based on relative merit:* The mandates of most of ISTEA's 15 factors, along with improved system safety, were incorporated into a set of desired objectives to which points were assigned. These objectives were clustered into four broad categories: Maintain the Metropolitan Transportation System (MTS); Improve the Efficiency and Effectiveness of the MTS; Expand the MTS; and External Impacts. The first category incorporated such ISTEA factors as maintaining the MTS, access to ports, and meeting needs identified by the management systems. The second included the ISTEA factors related to congestion relief, cost effectiveness, efficient freight movement, and increased transit security. The expansion category addressed preservation of future transportation corridors and expansion of transit services. Finally, the external impacts category was a method of taking into account considerations of land use and energy conservation, in addition to the Clean Air Act and the ADA. As discussed more fully in the next section, weights were then established for the factors within the four categories after considerable debate.

3. *Programming principles that ensured that the program of projects would leverage the most state and federal resources and be equitable:* The programming principles were produced from STP/CMAQ eligibility requirements and from the equity subcommittee's prior recommendations. Based on criteria such as project readiness, cost effectiveness, project merit, and equity, these programming rules are used to develop the best possible program of projects that will benefit the MTS, regardless of mode.

Development of Scoring Weights

After grouping the scoring objectives into the four main categories, the ranking and evaluation subcommittee assigned specific points within the categories with the assistance of Professor Elizabeth Deakin of the University of California at Berkeley, a consultant on this process. She suggested four basic principles to guide scoring efforts.

- *Tie the solution to the problem wherever possible.* This resulted in the use of multiplying factors for the scale of the existing safety and congestion problems and the expansion demand so that projects addressing more severe congestion problems, for instance, received higher scores.
- *Use measures that cut across modes, wherever possible.* This was not easy or always possible. However, as a goal, it kept the group focused on the variety of projects to be considered, and on measuring the benefits of projects of different modes in a uniform manner.
- *Anticipate the data that will be available in the future from ISTEA-mandated management systems, and incorporate performance-based standards into the criteria.* In the Bay Area, this was easiest in the area of pavement

management, as a Pavement Management System (PMS) already exists. For instance, the score weights given to road rehabilitation projects depended on the PMS rating of that facility.

- *Rely upon and strengthen existing plans and programs.* This is related to the use of performance-based standards mentioned above, but additionally seeks to better integrate the planning and programming processes. Projects competing in the seismic retrofit category, for example, are rated using evaluations already performed by Caltrans.

Lessons Learned from Applying the Criteria

MTC staff used the new multimodal prioritization criteria to establish a program of projects for the 1993 *Transportation Improvement Program* (TIP) based on submittals from county-level CMAs and regional project sponsors. The process of evaluating over 350 projects in a four-week period involved the majority of the MTC professional staff, organized into teams based on geographic responsibilities. The final 1993 TIP included funds for 225 projects that cut across all modes.

Although widespread support existed for the screening and scoring criteria and programming principles, no one was surprised to discover during the programming of the 1993 TIP that several aspects of the process required finetuning. The need to develop consistent guidance on the application of the multipliers by MTC staff became apparent, and problems with specific criteria emerged. The second-generation scoring criteria now include previously neglected benefits such as the congestion relief impacts of maintenance projects and the full significance of port and other intermodal projects. The cost-effectiveness criterion has been made more rigorous, and numerous scoring elements have been clarified. For instance, bicycle and pedestrian multipliers and impact values have been refined, resulting in changes in the competitiveness of these projects. The Transportation Control Measures (TCM) categories have also been adjusted, and the land use criterion has been amended to make it consistent with the goals in the most recent long-range *Regional Transportation Plan*.

The region debated and decided not to give projects with a high local match a scoring bonus, on the basis that the scoring should be performance based. Methods for better defining and processing regional projects also were extensively discussed. MTC concluded that sponsors of regional projects, such as multi-county freeway service patrols, would need to work with the county-level CMAs to get their projects on a CMA list. As a last resort MTC has carried a number of regional projects after sponsors were unable to get their projects added to a CMA list.

In addition, since project sponsors commented that the application forms were difficult to complete, revised forms were developed that better match the format and data needs of the scoring criteria. These applications are included in the appendix. However, project sponsors are still reporting problems with this version, particularly with the calculations for travel time savings, operating cost savings, and the cost-effectiveness ratio. In response, MTC produced a template for figuring the cost-effectiveness ratio that will be included with all applications.

While sponsors are still adjusting to the new application forms, and particularly to their different data requirements, widespread support exists for the development process, which is seen as fairly balancing the needs of the region with equitable

treatment for all interests.
Following are some recommendations for areas developing a STP/CMAQ program:

1. Involve all interested parties, particularly representatives from all categories of potential project sponsors, in developing the project selection process. Their engagement early in the process builds greater understanding of and support for the final selection criteria.

2. Take full advantage of STP/CMAQ's flexibility when devising the selection criteria so that the final list of highest ranked projects innovatively addresses your region's transportation problems rather than reflecting standard solutions.

3. Be sure that the scoring criteria are clear enough that they can be applied consistently by different staff or committee members.

4. Build into the criteria the capacity to incorporate the results of the management systems as they become operational.

5. Recognize that the criteria probably will need to be revised to reflect changing conditions and new regulations.

6. Allow sufficient time in the programming cycle for project sponsors and staff to participate and adjust to the new process.

Table 1
23 USC Section 134(f) of ISTEA states:

Factors to be considered – In developing transportation plans and programs pursuant to this section, each metropolitan planning organization shall, at minimum, consider the following:

1) Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently.
2) The consistency of transportation planning with applicable Federal, State and local energy conservation programs, goals and objectives.
3) The need to relieve congestion and prevent congestion from occurring where it does not yet occur.
4) The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short and long-term land use and development plans.
5) The programming of expenditure on transportation enhancement activities as required in Section 133.
6) The effects of all transportation projects to be undertaken in the metropolitan area, without regard to whether such projects are publicly funded.
7) International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations.
8) The need for connectivity of roads within the metropolitan area with roads outside of the metropolitan area.
9) The transportation needs identified through use of the management systems required by section 303 of this title.
10) Preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way which may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss.
11) Methods to enhance the efficient movement of freight.
12) The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement.
13) The overall social, economic, energy, and environmental effects of transportation decisions.
14) Methods to expand and enhance transit services and increase the use of such services.
15) Capital investments that would result in increased security in transit systems.

Appendix A

Screening Criteria

A project must be in conformance with the following threshold requirements before the project can be scored and ranked in the 1994 RTIP/ 1995 TIP. All of the applicable Screening Criteria must be met for a project to be considered for inclusion in the RTIP or TIP. Screening criteria fall into five basic groups. These are the subheadings that are used to group the screening criteria.

I. Consistency Requirements;
II. Financial Requirements;
III. Project Specific Requirements;
IV. Air Quality Requirements; and
V. Americans with Disabilities Act (ADA) Requirements.

I. Consistency Requirements

A. The CMA certifies that the priority list was developed by a process that meets the mandates of ISTEA and follows the Statewide and Metropolitan Planning rule issued by the U.S. Department of Transportation. The certification would include the following minimum requirements.

1. A GOOD FAITH EFFORT HAS BEEN MADE TO BRING ALL PLAYERS TO THE TABLE. Players are defined as eligible project sponsors (public agencies). Table is defined as the technical committee, not the policy board. The players include transit operators, Cities (includes bike/pedestrian/rideshare interests), Counties (includes bike/pedestrian/rideshare interests), Congestion Management Agencies, Caltrans, Air Quality Management District(s), major ports and airports (individually, rather than by a city or county), and other regional project sponsors. Bicycle/pedestrian/ridesharing agencies could also be given their own seat at the table, not just be represented by the cities and counties, as an option.

   Each eligible project sponsor (public agency) must be a voting member of the committee that recommends the process, local criteria, and project list to the policy board. All project sponsors must be solicited for both "guarantee" and "discretionary" programs.

2. THE PLANNING PROCESS INCLUDED PUBLIC PARTICIPATION. The CMA priority list recommendation was presented at a public meeting, at which public participation and comment was invited and considered. The final CMA priority list was adopted after a public hearing.

3. THE ISTEA 15 FACTORS AND OTHER ISTEA MANDATES WERE USED TO ESTABLISH LOCAL PRIORITIES. The CMA is to provide documentation as to how all projects were evaluated and prioritized. A sample rating sheet and description of the methodology of project

evaluation should be provided, both for "guarantee" projects and for projects proposed for programming from regional discretionary funds. Any formula distribution used must have a planning justification and be consistent with ISTEA. Interim guidance issued (April 6, 1992) by the U.S. Department of Transportation states:

> "Procedures or agreements that distribute sub-allocated STP or Section 9 funds to individual jurisdictions or modes within the metropolitan area by predetermined percentages or formulas are inconsistent with the ISTEA provisions that require MPOs in cooperation with the State and transit operators to develop a prioritized and financially reasonable TIP unless they can be clearly shown to be based on considerations required to be addressed as part of the planning process. Such procedures and agreements otherwise ignore the dynamics of the planning process, hinder response to the high priority problems identified through the planning process, and frustrate the flexibility features of the ISTEA."

MTC must agree with the justification for any formula fund distribution.

Certification Procedure:
The CMA provides certification materials with its priority list by March 31, 1993. MTC staff recommends acceptance or denial of certification to the Work Program Committee. If MTC denies the certification, MTC (the WPC) would have two options:

a. Give CMA 45 days to rectify its planning process and adopt a new priority list.

b. Program projects completely with MTC discretion.

B. The proposed project must be consistent with the Regional Transportation Plan (RTP). The RTP is being simultaneously revised, with the current schedule calling for a draft document in January 1994, with interim "1994 RTP Capital Investment Plan Decision Process and Principles for RTP Capital Investment" to be adopted in January 1993 (MTC Resolution No. 2515). The RTP includes an adopted HOV Master Plan, Seaport Plan, and Airport Plan, and all project proposals must specifically be consistent with these elements of the RTP, if applicable. In the case of HOV lanes, substituting mixed flow widenings where an HOV is called for must be justified by an operational analysis. Where the HOV Master Plan does not specify the need for an HOV lane, project sponsors should justify the need for the HOV lane. Re-designation of programmed HOV lanes may jeopardize project funding. Small projects must be consistent with the policy direction of the RTP, as the RTP will not go into a sufficient level of detail to specifically list them.

C. Projects near or crossing county boundaries must be consistent/ complementary with the facility (or proposed facility) in the adjacent county.

D. Projects must either be included in an adopted local or regional plan (such as Congestion Management Programs, Short Range Transit Plans, County-wide transportation plans pursuant to AB3705, the Seaport and Airport Plans, the State Implementation Plan, the Clean Air Plan, the Regional Transportation Plan, and local General Plans) or, for the 95 TIP and the 94 RTIP, be an

ISTEA emphasis area. ISTEA emphasis areas include maintenance and improved efficiency of the transportation system, new technology, the implementation of federal transportation control measures, and low cost operational improvements.

E. All proposed projects must be consistent with local land use plans. Proof of lack of inconsistency, where the local land use plans do not provide a sufficient level of detail, is acceptable.

F. All new rail starts projects must be consistent with MTC Resolution No. 1876, the regional rail agreement. Construction will only be considered for those projects in Tier 1 . Projects from lower tiers will be considered for right-of-way preservation or planning only. In future cycles, this requirement will be met through consistency with the financially constrained Regional Transportation Plan. (This criterion is included with the expectation that an update to MTC Resolution No. 1876 will be considered prior to proposed projects being evaluated for the STP-CMAQ-FCR cycle in June, 1993.)

G. Highway projects which will increase the capacity of the roadway for single occupant vehicles must be consistent with the Congestion Management System (CMS), as required by ISTEA. Following the "Interim Guidance" from the U.S. Department of Transportation (until regulations regarding the development of the CMS are issued), the existing self-certified planning process that MTC uses to develop the TIP will suffice, if supplemented by a project-level NEPA analysis which includes full examination of alternative operational strategies. <u>All</u> projects, if programmed, will be required to comply with MTC Resolution No. 2270.

H. ISTEA establishes fifteen factors that must be considered in the development of the TIP. All projects must address at least one of these factors, as listed in Table 1.

II. Financial Requirements

A. The project, as taken from the priority-ordered TIP/RTIP submittal from the CMA, is within the bid limit set by MTC using projections of available funds. Every CMA is allowed to submit at least one project. Bid targets may be exceeded if the last project can not be segmented, although all large projects must be broken into usable segments.

Sponsors of regional projects must submit their projects to the CMAs and to MTC for consideration. (See discussion of process and schedule for regional projects.) The definition of a regional project is as follows. It is project specific, not sponsor specific.

1. The project must have significant overall regional transportation system (MTS) impacts, in terms of efficiency and access to major activity centers, AND

2. The project is a key regional transportation system (MTS) link (though

not necessarily currently on the MTS) which affects the region, OR

3. The project implements a phase of an R&D project (for instance a demonstration-type project) that has a likely potential of regional applicability.

(MTC will make the final determination to classify a project as a regional project)

B. The project must have reasonable cost estimates and be supported by an adequate financial plan. Adequate financial plans include the identification of all sources of funding to build the project, a logical cash flow, and sensible project phasing. Transit operators must demonstrate financial capacity, to be documented in the adopted TIP/RTIP, as required by the FTA. All facilities that require an ongoing operating budget to be useful must demonstrate that such financial capability exists.

C. As required by FHWA, all local contributions to the project must be affirmed by a formal action of a policy board with the authority to commit funds. Such a formal action must have occurred prior to the inclusion of a project in the adopted TIP/RTIP.

III. Project Specific Requirements

A. All projects must be well defined. There must be clear project limits, intended scope of work, and project concept. Planning projects to further define longer range federally eligible projects are acceptable.

B. All projects must be well justified. Wherever possible, this justification should include the results of existing management systems or other performance based standards. There must be a clear need directly addressed by the project.

C. All projects considered by MTC must have a completed application form, including all attachments, and should be submitted in accordance with established deadlines.

D. Local streets and roads rehabilitation projects must be based on Pavement Management Systems (PMS).

E. All projects must have appropriate phasing and must result in usable segments. Planning for future improvements or right-of-way preservation are acceptable phases.

F. For STP/CMAQ eligibility, the project must be advanced to a state of readiness for implementation by September 30, 1997. This includes that ability to obligate funds by September 30 of the year in which the funds were to be programmed. Programming emphasis for STP/CMAQ funds is on projects that will show results. Necessary clearances have been obtained so that the project can be implemented in the year programmed.

In order for a project to be programmed for FCR funds, there must be a reasonable expectation of readiness to obligate funds in the year indicated.

G. Highway projects must include appropriate components of the Traffic Operations System (TOS), such as ramp metering, HOV bypasses of meters, and changeable message signs, if applicable (i.e. major capacity increasing project).

H. All projects must be eligible for either the STP, CMAQ, or RTIP program.

IV. Air Quality Requirements

A. Proposed projects are not required to have certified environmental documents to be included in the TIP/RTIP. If the documents were certified after October 30, 1989, the documentation and project level air quality analyses must be consistent with MTC Resolution No. 2270, i.e. there can be no significant unmitigated negative impacts to the region's air quality shown and adequate transportation control measures must be included.

V. Americans with Disabilities Act (ADA) Requirements

A. All proposed transit project must meet ADA requirements, if applicable. ADA may also apply to some road projects, e.g. call boxes.

Screening Criteria Guidance (to be supplemented by rationale for project categorization)

Projects with localized benefits are not regional projects. The following projects are examples of regional projects:

- TOS Central facility
- Transbay tube (system improvement)
- BART train destination system (control)
- Translink
- Freeway service patrol (more than one county)
- BART AFC replacement if MTS improvement (even if implemented by station groups)
- Commute-mobile store (if significant regional benefits)
- Regional transit information phone system link
- Employer audits (only if significant regional resource beyond employer requirements)

Scoring Criteria

The Scoring Criteria are described in the following table. The Scoring Criteria were originally formulated, and were revised, with the following objectives.

- Projects on or with significant benefits to the MTS are given priority throughout the point system.
- Projects that meet a documented need or solve an identified problem are rewarded. Specifically, projects that are the outcome of Management Systems mandated by ISTEA are encouraged, and projects that meet the greatest need or solve the biggest problems are rewarded through the point system.
- Cost-effective projects, particularly those that fit optimal replacement cycles or demonstrably improve the efficiency and effectiveness of the MTS, are rewarded.
- Projects that improve multiple modes are encouraged through the point system.
- Projects are based on adopted plans and programs.
- The Criteria are applicable to all modes and enable the direct comparison of projects of different modes with equivalent measurements wherever possible.
- The 15 factors established by ISTEA are all considered within the Screening, Scoring and Programming Criteria as required by law.
- The program which is established using these criteria based on an evaluation of technical merit must also be in conformance with the Federal Clean Air Act. This conformity evaluation includes documentation of the expeditious implementation of TCMs.

Scoring Criteria by Category

30		Maintain/Sustain the Metropolitan Transportation System (MTS)
		The following scores are for the STP-CMAQ project evaluations. A project can score on one line item only in this category. The two exceptions to this are for seismic retrofit as part of a larger project, and for prevention of unacceptable breakdowns in the MTS. **Rehabilitation and replacements based on Management Systems** Pavement Management System - Normal pavement rehabilitation cycles are to be determined using the MTC PMS rating system (for an existing facility on the MTS). If a PMS other than MTC's rating system was used, or if another management system was used, a comparable interpretation is acceptable.
	30	Optimal Rehabilitation - Poor to very poor, PMS rating 50 to 25 Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score. (For example, if Rehabilitation is 50% of a project, on a cost basis, a project would score 15 points here).
	20	Replacement of Failed Road - Very poor to failed, PMS rating < 25 Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score.
	10	Rehabilitation of Road that prolongs Good Condition - Good to poor, PMS rating 70 to 50 Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score.
		Public Transit Management System - Normal replacement cycles are determined by FTA Circular 9030.1A and the MTC Bay Area Transit Finance Plan as justified in the operator's Short Range Transit Plan (SRTP). Normal replacement cycles are listed in Guidance Section A. Normal Replacement or Rehabilitation - Capital asset is at the end of its useful life in the program year.
	30	Replacement is the entire project.
	30	Rehabilitation is the entire project,and useful life is extended at least 40%
		Urgent Replacement or Rehabilitation - Capital asset is beyond its useful life in the program year. (Urgency is defined as an asset that is 20% older than the normal replacement cycle in Section A).
	30	Replacement is the entire project.
	30	Rehabilitation is the entire project, and useful life is extended over 50%.
		Port/Intermodal Rehabilitation - Normal roadway projects are scored accordning to the PMS scale above. Rail or intermodal facilities are scored according to the transit scale above, using the FTA replacement cycles for like assets.
		Rehabilitation and replacements NOT based on Management Systems Roadway Support Infrastructure projects - For support infrastructure such as drainage, retaining walls, or obsolete signal controllers, the project receives the following points (using the standards in Caltrans Highway Design Manual):
	20	Optimal Rehabilitation - Poor to very poor condition Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score.
	15	Replacement of Failed Road Section - Very poor to failed condition Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score.
	5	Rehabilitation of Road Component - Good to poor condition Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score.

30		**Maintain/Sustain the Metropolitan Transportation System (MTS) (Continued)**
		Publicly owned pedestrian and bicycle facilities - For transportation uses as opposed to purely recreational trips.
	20	Optimal Rehabilitation - Poor to very poor condition Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score.
	15	Replacement of Failed Element - Very poor to failed condition Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score.
	5	Rehabilitation of Facility - Good to poor condition Rehabilitation is the entire project. If Rehabilitation is a portion of the project, the Rehabilitation portion of total project costs is multiplied by "entire project" score.
		Normal transit replacements, like pavement rehabilitations, must be based on management systems and the SRTP.
		Seismic Retrofit Caltrans has evaluated potential seismic retrofit projects, and has categorized the projects by risk and need. Other acceptable studies have been done for components other than bridges on the highway system, thus, other modes and facilities are not excluded. (Some transit facilities are on the Caltrans list).
	30	Entire project is seismic retrofit, and project is included in Tier 1 of Caltrans Seismic Retrofit list, or project corrects an identified high risk.
	20	Entire project is seismic retrofit, and project is in lower tiers of Caltrans Seismic Retrofit list, or project corrects an identified lower risk.
	10	Identified seismic retrofit need is included as part of a larger project.
		Prevention of unacceptable breakdowns in the MTS This is an emergency safety-valve criterion.
	10	Project is for rehabilitation or replacement necessary to prevent unacceptable breakdowns in the MTS.
30		**Improve the Efficiency and Effectiveness of the MTS**
		This scoring category has several parts. While the maximum score for the category is 30 points (for STP-CMAQ and FCR), a project can score in each of the parts of the category. A project can score on only one line item in the first part, "Safety and Security." A project usually scores on only one line item in the second category, "Congestion Relief," but a project with demonstrated congestion relief or service improvement benefits to other modes, can receive points for the affected modes. **Safety and Security** - The first part of the Improve Efficiency and Effectiveness of the MTS category is Safety and Security. A project earns a multiplier - based on the magnitude of the problem - which is then multiplied by the impact score - based on the degree to which a project can solve a problem. Safety and Security Multiplier The existing safety or security problem is defined across modes. The multiplier indicates the severity of the safety or security problem. The score of a project in the Safety and Security part is the product of the Multiplier and the Impact points. **Roadway Safety Multiplier** — Multiplier If the accident rate is average for the facility type: 0.5 If the accident rate is 25% above average: 0.8 If the accident rate is over 25% higher than ave: 0.9 or 1.0 If the accident rate is 25% below average: 0.2 If the accident rate is more than 25% below ave: 0.1 or 0 For intersections, the multiplier is based on the 3-year total accidents. The accident rates and multipliers by facility type are: Number of Accidents Total for 90,91 and 92 — Multiplier More than 75 accidents 1.0 50 to 75 accidents 0.8 40 t0 49 accidents 0.6 20 to 39 accidents 0.4 10 to 19 accidents 0.2 5 to 9 accidents 0.1 0 to 5 accidents 0.0

30 | **Improve the Efficiency and Effectiveness of the MTS (Continued)**

For highways and arterials, accidents per million vehicle miles is the measure that will be used. If data are not given in ACC/MVM, it can be calculated by the project sponsor as:

$$\frac{\text{Number of accidents (avg. for 90, 91, 92) X 1,000,000}}{\text{Ave Daily Traffic (Veh/Day/Yr) X 365 X length of project in miles}}$$

The accident rates and multipliers by facility type are:

	Accident Rate				
Facility Type	CA Avg	125% of CA Avg.	> 125% of CA Avg.	75%of CA Avg.	< 75% of CA Avg.
Freeway	0.69	0.86		0.52	
Expressway- 2 lane	0.89	1.11		0.68	
Exprswy- Multilane	1.00	1.25		0.75	
Conventional-2 lane	1.69	2.11		1.27	
Convntnl- Multilane	2.72	3.40		2.04	
Multiplier:	0.5	0.8	0.9 to 1	0.2	0.1 to 0

Note: Similar tables will be provided for injuries/fatalities. A project sponsor can use actual accident or injury/fatality data to determine the safety multiplier

Transit/Intermodal Safety Multiplier The multiplier is based on the 3-year total of incidents that the project will address. These multipliers can be adjusted to reflect the severity of the incidents.

Number of Incidents Total for 90,91 and 92	Multiplier
More than 24 incidents	1.0
20 to 24 incidents	0.8
15 to 19 incidents	0.6
10 to 14 incidents	0.4
5 to 9 incidents	0.2
2 to 4 incidents	0.1
0 to 1 incidents	0.0

Bicycle and Pedestrian Safety Multiplier The multiplier is based on the 3-year total of incidents that the project will address. These multipliers can be adjusted to reflect the severity of the incidents.

Number of Incidents Total for 90,91 and 92	Multiplier
More than 10 incidents	1.0
8 to 10 incidents	0.8
6 to 7 incidents	0.6
4 to 5 incidents	0.4
2 to 3 incidents	0.2
1 to 2 incidents	0.1
0 incidents	0.0

Safety and Security Impact Values The existing safety or security problem is defined across modes. The score of a project in the Safety and Security part is the product of the Multiplier and the Impact points. The multiplier indicates the severity of the safety or security problem, and the impact values indicate the impact the proposed project would have in solving the safety or security problem.

Roadway Projects Safety Impact Points

16 to 20 — High Safety Impact
HOV enforcement areas.
Grade separations.
Conversion from expressway to freeway or median barrier, when crossover median accidents are the issue.
Geometric improvements, shoulders, curve corrections.
New signals that meet (Caltrans (state highway) or HCM) warrants.

8 to 12 — Medium Safety Impact
Widenings, auxiliary lanes, left turn pockets
Signal interconnect.
Interchange modifications.
Bike lockers or racks.

30		Improve the Efficiency and Effectiveness of the MTS (Continued)
	0 to 4	Low Safety Impact New interchanges.
	16 to 20	**Transit/Intermodal Projects Safety Impact Points** High Safety Impact Passenger or employee safety/security project, such as: Lighting in high security area. Handrails. Rail Switches.
	8 to 12	Medium Safety Impact Equipment or assets safety/security project, such as: Lighting in low security area. Bus turnouts/bulbs. Maintenance yard fences. Emergency communication systems.
	0 to 4	Low Safety Impact Revenue collection security project.
	16 to 20	**Pedestrian and Bicycle Projects Safety Impact Points** High Safety Impact Significant Class 1 bike path or Class 2 bike lane. Sidewalks with curb cuts where none exist. Curb cuts. Resolves conflict between bikes or pedestrians and cars or trains, such as traffic signal actuations. Grade separations.
	8	Medium Safety Impact Minor Class 1 bike path or Class 2 bike lane. Sidewalk improvement. Signage.
	0 to 4	Low Safety Impact Class 3 bikeway or Class 2 bike lane. Signage.
		Congestion Relief The second part of the Improve Efficiency and Effectiveness of the MTS category is Congestion Relief. Congestion Relief is based on an assessment of the existing congestion problem and the impact of the proposed project on reducing such problems. Existing congestion is evaluated across modes by looking at the volume of traffic/number of people affected by the congestion. A project earns a multiplier - based on the magnitude of the problem - which is then multiplied by the impact score - based on the degree to which a project can solve a problem. Multimodal projects may score under more than one mode (where each modal feature is weighted by the proportion of that mode to the total project) but a project's congestion relief score is capped at 20 points. Congestion Relief Multiplier The existing congestion problem applies to all modes. The score of a project in the Congestion Relief part is the product of the Multiplier and the Impact points. **Roadway Congestion Relief Multiplier** The multiplier for roadway projects, or the severity of the congestion problem, is the level of service (LOS) for the affected roadway segment. LOS is peak average, and must be calculated according to the CMA adopted method (HCM - 1985, Circular 212, Caltrans for freeway segments LOS). Peak Average LOS — Multiplier LOS = F — 1.0 LOS = E — 0.8 LOS = D — 0.6 LOS = C — 0.2 LOS = B — 0.1 LOS = A — 0.0

30		Improve the Efficiency and Effectiveness of the MTS (Continued)
		Transit/Intermodal Congestion Relief Multiplier The transit/intermodal multiplier, or severity of the congestion problem, may be calculated using one of two standards, depending on the type of congestion the proposed project is to address. For transit projects designed to relieve transit loading, the multipliers relating to peak load factors would apply. For transit/intermodal projects designed to relieve corridor congestion, the roadway LOS factors above, for the corresponding route, would apply. Peak Load Factor — Multiplier >1.25 — 1.0 1.00 — 0.8 0.75 — 0.5 0.50 — 0.2 0.25 — 0.1 <0.25 — 0.0 Peak Ave. Corresponding Roadway LOS — Multiplier LOS = F — 1.0 LOS = E — 0.8 LOS = D — 0.6 LOS = C — 0.2 LOS = B — 0.1 LOS = A — 0.0
		Bicycle and Pedestrian Projects Congestion Relief Multiplier The multiplier, or severity of the congestion problem, may be calculated using one of two standards, depending on the type of congestion the proposed project is to address. For bicycle and pedestrian projects designed to relieve congestion on a particular facility (separate from road or transit congestion), the multipliers relating to the facility would apply, in terms of bikes/week. These are relative to other facilities in the region. For bike and pedestrian projects designed to relieve corridor congestion, the roadway LOS factors, below, for the corresponding route, would apply. Facility loading — Multiplier Above regional average — 0.8 Regional average — 0.5 Below regional average — 0.1 Peak Ave. Parallel Roadway LOS — Multiplier LOS = F — 1.0 LOS = E — 0.8 LOS = D — 0.6 LOS = C — 0.2 LOS = B — 0.1 LOS = A — 0.0
	16 to 20	Congestion Relief Impact Values The existing congestion relief problem is defined across modes by the multiplier values. The score of a project in the Congestion Relief part is the product of the Multiplier and the Impact points. The multiplier indicates the severity of the safety or security problem, and the impact values indicate the impact the proposed project would have in solving the congestion problem. **Roadway Projects Congestion Relief Impact Points** Impact values are given in ranges. The particular value a project receives within this range depends on the degree of congestion relief provided by the proposed design. High Congestion Relief Impact - Project must be on or significantly benefit the MTS: HOV lanes. CMP Deficiency Plan Measure. Ramp metering with HOV bypasses. Signal interconnect with 8 or more signals. Gap closure with system-wide benefit. Interchange that upgrades to freeway standards (grade separation). Traffic Operations System (TOS).

30		Improve the Efficiency and Effectiveness of the MTS (Continued)
	8 to 12	**Medium Congestion Relief Impact** - Project must be on the MTS, significantly benefit the MTS, or connect to the MTS: Auxiliary lanes (on-ramp to off-ramp) - on or significantly benefit MTS. Left turn pockets or other intersection improvements - on or significantly benefit MTS. Park and ride lots - on or significantly benefit MTS. Signal interconnect of 2 or more signals - on or significantly benefit MTS. New signal where none currently exists and meets warrants - on or significantly benefits MTS. Ramp metering without HOV bypass - on or significantly benefits MTS. Other high impact project type (above) connecting to MTS.
	0 to 4	**Low Congestion Relief Impact** - Project must be on the MTS, significantly benefit the MTS, or connect to the MTS: New local interchanges. Gap closure that only moves bottleneck condition. Any high or medium impact project type not on or connecting to MTS. Roadway rehabilitation or resurfacing.
	16 to 20	**Transit/Intermodal Projects Congestion Relief Impact Points** Impact values are given in ranges. The particular value a project receives within this range depends on the degree of congestion relief provided by the proposed design. **High Congestion Relief Impact** - Project must be on or significantly benefit the MTS: Reduces transit load factor by 10% or more. Increases service capacity by 10% or more. Increases service reliability by 10% or more. Major interconnect, or fare coordination project. Bus turnouts/bulbs. Major intermodal facility. Reduces transfer time by 10% or more.
	8 to 12	**Medium Congestion Relief Impact** - Project must be on the MTS, significantly benefit the MTS, or connect to the MTS: Minor improvement (less than 10%) in load factor, service capacity, ease of transfers, or service reliability on the MTS; improvement in load factor, service capacity, ease of transfers, or service reliability off the MTS. Minor interconnect, or fare coordination project.
	0 to 4	**Low Congestion Relief Impact** - Project must be on the MTS, significantly benefit the MTS, or connect to the MTS: Increases passenger comfort and convenience. Bike lockers or bike racks. Intermodal facility with unknown level of transfers. Transit rehabilitation or replacement.
	16	**Bicycle and Pedestrian Projects Congestion Relief Impact Points** Impact values are given in ranges. The particular value a project receives within this range depends on the degree of congestion relief provided by the proposed design. Some impact values have been reduced to reflect the potential mode split for these projects. **High Congestion Relief Impact** - Project must be on or significantly benefit the MTS: Class I or Class II bike path/lane or sidewalk necessary link for journey to work.
	8 to 12	**Medium Congestion Relief Impact** - Project must be on the MTS, significantly benefit the MTS, or connect to the MTS: Bike path/lane or sidewalk that will primarily serve commuters (i.e., parallel reliever route). Sidewalks where none exist- gap closure connecting to transit center. Projects to interconnect across jurisdictional boundaries.
	0 to 4	**Low Congestion Relief Impact** - Project must be on the MTS, significantly benefit the MTS, or connect to the MTS: Bike path lane with mixed commuter and other non-recreational uses, on or connecting to the MTS. Useable sidewalk segments, including upgrades and new installations. Sidewalks where none exist- connecting activity centers. Signage. Bikeway or sidewalk rehabilitation or resurfacing.

30		**Improve the Efficiency and Effectiveness of the MTS (Continued)**
		Cost-Effectiveness The third part of the Improve Efficiency and Effectiveness of the MTS category is the Cost-Effectiveness criterion. It has been revised to measure the ratio of annual benefits (in terms of total travel time savings and operating cost savings for the project) to annualized total project costs. The ratios of all projects submitted will then be adjusted to the median in the 0-10 scale; in other words, if the most number of projects have a cost-effectiveness ratio of 0.5, this value will be assigned 5 points, and the other values will be assigned accordingly by number of projects in each quartile. Cost - Effectiveness Measure: Annual Time Travel Savings + Annual Operating Cost Savings / Annualized Total Project Costs Numerator: Annual travel time savings are total for the entire proposed project. It is the annual average over the life of the project expressed in 1992 dollars. For the travel time savings calculations, the value of time assumptions in the MTC model should be used. These are $7.50 for work trips, and $3.50 for non-work trips (these values are in 1992 dollars). If the MTC assumptions are not used, justifications must include defense for alternative assumptions. (Worksheets for calculating travel time savings can be obtained from MTC). Annual operating cost savings are the annual average over the life of the project, as compared to the "no-project" alternative. The calculation of the operating cost savings must be shown on the application.
		Denominator The annualized total project cost = the total project cost times the capital recovery factor. The formula for the capital recovery factor is: $$\frac{i}{1 - \frac{1}{(1+i)^n}}$$ Where "i" is assumed to be 5% Where "n" is the useful life of the proposed project For ease of calculation, the following table provides the capital recovery factors for different types of projects. To calculate the annualized total project cost, just multiply the total project cost by the capital recovery factor for the appropriate project type in the table below.

Project Type	Useful Life (Yrs)	Capital Recovery Factor
New road or highway facility	40	0.05827816
Road reconstruction	40	0.05827816
Bikeway	40	0.05827816
Pedestrian walkway or bridge	40	0.05827816
Transit maintenance facility	40	0.05827816
Transit transfer facilities	40	0.05827816
Bus stops or turnouts	40	0.05827816
Transit extensions, track, or overhead lines and support	40	0.05827816
Light rail vehicles	25	0.07095246
Heavy rail cars/locomotives	25	0.07095246
Ferry	25	0.07095246
Trolley bus	18	0.08554622
Signalization equipment	15	0.09634229
Bus	12	0.11282541
Bike lockers	10	0.12950457
Transit maintenance tools	10	0.12950457
Service vehicles	7	0.17281982
Vans	4	0.28201183

30		**Improve the Efficiency and Effectiveness of the MTS (Continued)**
		Freight The fourth part of the Improve Efficiency and Effectiveness of the MTS category is the Freight Movement and Freight Facilities criterion.
		Project which improve the movement of freight on a truck route:
	20	Heavy trucks are more than 25% of the traffic flow.
	10	Heavy trucks are 10% to 25% of the traffic flow.
	0-5	Heavy trucks are less than 10% of the traffic flow.
		Intermodal Freight Facilities
	25 to 30	Major facility that serves the MTS (i.e., makes a major (>25%) reduction in the amount of time required for a freight container to travel through the region).
	15 to 20	Minor facility that serves the MTS (i.e., reduces the amount of time required for a freight container or other cargo to travel through the region).
	5 to 10	Significant activity not tied to the MTS.
15		**System Expansion**
		The following scores are for the STP-CMAQ project evaluations. A project can score on one line item only in this category. Projects with multimodal aspects are scored as the primary mode of the project. This category is for expansion projects only. System expansion projects will first be evaluated as to whether or not they meet demand. Current demand will be given a higher priority than projected demand. Examples of how demand can be demonstrated include, but are not limited to, LOS data, volumes, or load factors for transit. Support in established planning documents such as Short Range Transit Plans, Congestion Management Plans, ADA plans, or other applicable plans or studies will be given the most credence. Then, points will be assigned up to a maximum of 15 to different project types according to mode. **System Expansion Demand Multiplier** This is a combination of the Volume Average Daily Traffic (ADT) and Level of Service (LOS). This applies to all roadway projects. This roadway measure is also used as an indication of demand within the corridor for other modes. If demand is to be demonstrated by other means, it must be in according to a similar rationale, i.e., by corresponding volumes and levels of service - with LOS C corresponding to the industry or modal average, and ADT 30,000-50,000 corresponding to the industry or modal average.

	LOS				
ADT	F	E	D	C	B
>50,000	1.0	0.9	0.6	0.4	0.1
30-50,000	0.8	0.6	0.4	0.2	0.1
10-30,000	0.6	0.4	0.2	0.1	0.0

		System Expansion Impact Values The multiplier indicates the demand for expanded service, and the impact values indicate the impact a project type would have in meeting that demand. The score in this part of the category is the product of the multiplier and the impact value.
		Roadway Project Impact Values:
		(Note: these can be additive).
	5	HOV lanes.
	0-2	Mixed flow capacity, including arterials.
	1-5	Supporting features such as ramp metering, park and rides, bus routes, bicycle and pedestrian facilities.
	5	On or significantly benefits the MTS.
	2-3	Minor benefit to the MTS.
		Transit Project Impact Values:
	15	Significant expansion on or significantly benefits the MTS, including supporting features.
	2-10	Minor expansion, on or benefits the MTS, supported by the SRTP.

15		System Expansion (Continued)
		Intermodal Freight Facilities Expansion Project Impact Values:
	15	Access to major freight distribution facilities.
	2-10	Access to minor freight distribution facilities.
	10-15	Access to containerized cargo port as defined by Seaport Plan.
	4-6	Access to other seaport as defined by the Seaport Plan.
	10-15	Access to air carrier airport.
	4-6	Access to airport with more than 100,000 operations per year.
	0-2	Access to other airports.
		Bicycle/Pedestrian Commuter Expansion Project Impact Values:
	10-15	Bike path/lane or sidewalk that will primarily serve commuters (i.e. parallel reliever route).
	4-6	Bike path/lane with mixed commuter and other non-recreation use or connects to MTS.
	0-2	Bike path/lane or sidewalk that is primarily for recreational travel or not on MTS.
		Corridor Preservation: A project can score under the System Expansion multiplier and impact value OR the Corridor Preservation, but not both.
	15	Right-of-way for major endangered transportation corridor, including station sites or future maintenance facilities.
	10	Right-of-way for major transportation corridor, including station sites or future maintenance facilities.
	0-5	Right-of-way for minor transportation corridor.
25		External Impacts
		Air Quality
		Projects which will produce an **improvement in Air Quality** over the life cycle of the project will be awarded points according to the following system:
	5	Adopted federal Transportation Control Measures (TCMs) required to bring the MTC region into compliance with the region's current federal State Implementation Plan (Clean Air Act) receive 5 points
		Projects with demonstrable air quality improvement impact based on analysis performed for the 1991 Clean Air Plan (includes both federal TCM (FTCM) and state TCM (STCM) measures). Projects may score under several subcategories if multiple TCMs are included in the project, up to a cap of 20 points for TCM inclusion.
		Most Effective TCMs (Group 1): Signal timing (FTCM 24 and 25); Market based measures (STCM 22); Ozone Excess "No Drive Days" (STCM 23).
	20	Entirely a TCM.
	15	Includes a TCM as a significant part.
	8	Includes a TCM as a minor part.
	5	No significant air quality impact in certified environmental document.
	0	Unknown air quality impact.
		Highly Effective TCMs (Group 2): Incident Management (FTCM 26); Employer based Trip Reduction Rule (STCM 2); Install Traffic Operations System (STCM 11); Implement Revenue Measures (STCM 21).
	15	Entirely a TCM.
	12	Includes a TCM as a significant part.
	8	Includes a TCM as a minor part.
	5	No significant air quality impact in certified environmental document.
	0	Unknown air quality impact.

25		External Impacts (Continued)
		Moderately and Marginally Effective TCMs (Groups 3, 4 and 5): Regional Transit Coordination (Translink and regional 800 transit phone number)(FTCM 21); Expand and Improve Public Transit (rail station improvements/intermodal stations, purchase of clean fuel buses for fleet expansion)(FTCM 3); Improve transit Service (STCM 3); Expand Regional Rail System (STCM 4); Improve Arterial Traffic Flow (STCM 12); Indirect Source Control Program (STCM 16); Upgrade CalTrain service (FTCM 19); Regional HOV System Plan (FTCM 20); Park and Ride lots (FTCM 7, 8); Employer Audits (FTCM 23); Local TSM Initiatives (FTCM 28); all other FTCMs, all other STCMs.
	10	Entirely a TCM.
	8	Includes a TCM as a significant part.
	5	Includes a TCM as a minor part.
	2	No significant air quality impact in certified environmental document.
	0	Unknown air quality impact.
		Land Use Criteria The Subcommittee agreed to adopt Planning Principle #6, the land use elements as the new Land Use criteria. If a project meets all three of the new elements, the project would receive eight (8) points; if a project meets two of the new elements, the project would receive six (6) points; if the project meets only one of the new criteria, the project gets four (4) points. The project can also get two (2) additional points if SIGNIFICANT, immediate, and direct land use impacts can be shown. The three elements of Land Use riterion are: 1. Transit investment that complements transit oriented land use plans and strategies (e.g., high density development around rail stations). 2. Improvements that make existing developments more pedestrian and bicycle friendly, that support HOV and transit use, and that improve passenger safety and convenience. 3. Investments that support land use policies that minimize the use of freeways for local trips (e.g., transportation investments that support infill and mixed use development).
		Energy Conservation/Modal Shift
	8-10	Directly promotes modal shift away from the single occupant vehicle, such as rail, bus, HOV or bicycle/pedestrian projects.
	4-6	Indirectly promotes modal shift, such as TOS, park and ride lots.
	4-6	Signal interconnection projects.
		Americans with Disabilities Act (ADA)
	20	Entire project is for ADA.
	5	ADA is a significant component of project.
	2	ADA is a minor component of project.
		TOTAL POINTS

II. Overall Multipliers for Planning Projects

All planning projects are first evaluated as if the project defined for the study were to be built. This is done according to the Screening and Scoring Criteria above. Second, the total score for the planning project is scaled down by the following multipliers. The particular multiplier used for a given project depends on the nearness and necessity of the planning project to direct and immediate transportation improvements.

Planning Activity	Multipliers
Preconstruction Activities such as Alternatives Analyses and project design	1.0 to 0.8
Priority Setting Studies such as county-wide bike plans or Deficiency Plans	0.6 to 0.4
Long-Range Feasibility Studies and general planning activities	0.2 to 0.0

Scoring Criteria Guidance

Section A.

Asset	Normal Replacement Cycle
Bus	12 yrs
Van	4 yrs
LRV	25 yrs (or FTA approved cycle)
Trolley Bus	18 yrs
Heavy Rail Car (CT, BART)	25 yrs
Ferry	25 yrs
Tools and Equipment	10 yrs
Service Vehicles	7 yrs
Track/OverheadWire/Facilities	40 years - Components can be replaced earlier based on industry standards (case-by-case determination)

Programming Criteria

General

The programming criteria are policies that are used to ensure that the regional program of projects leverages federal and state resources properly, and is balanced and equitable - in addition to the stated goals or increasing mobility and access and meeting the mandates of the Clean Air Act.

The following programming principles will be used to develop the 94 RTIP and the 95 TIP.

1. Each project must pass all of the screening criteria before the project can be considered for programming.

2. Project merit is defined as the total project score.

3. Priority is given to ready projects. Projects are to be programmed in the earliest year for which obligation authority is available. If necessary, ready projects are programmed by year in score order. (In other words, if a project with a score of 60 and a project with a score of 50 are both approved and ready to go in year 1, and obligation authority is available for only one project, the project with a score of 60 would be programmed in year 1, and the project with the score of 50 would be programmed in year 2.)

4. Priority may be given to the most cost-effective projects.

5. Geographic equity is addressed by STP programming to each county (area) of no less than 85%, and of no more than 115%, of their population share of total regional STP funds over the duration of the ISTEA.

6. Fifty percent (50%) of the total regional STP funds are programmed directly to the CMAs according to their relative population shares for purposes designated for STP funds in the ISTEA, provided that each project passes the screening criteria, including a certified planning process and projects implemented by September 30 of each fiscal year in which the projects are programmed. As necessary, these 50% STP Guarantee funds will be adjusted to meet the requirements of SB1435.

   Three percent (3%) of the total regional STP funds are programmed to the CMAs according to their relative population shares for planning purposes. A CMA is guaranteed at least $100,000 per year in STP planning funds.

   The remaining STP funds are programmed at MTC discretion.

7. Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds are programmed at MTC discretion. Emphasis in programming is on air quality improvement, based on the effectiveness of TCMs (measurable reductions in emissions) shown in the analysis prepared as a basis for adopting the federal TCMs, MTC Reso. No. 2131, and the TCMs designated as "stalled" by federal court order, and the regional impact of the TCMs. CMAQ projects are programmed according to the following hierarchy, with projects programmed in score order to score 25 in each group.

Group 1: Expeditious implementation of currently adopted federal TCMs deemed "stalled" per federal court order, or adopted State Implementation Plan (SIP) projects that have not been fully implemented.

Group 2: Other currently adopted federal and state TCMs by effectiveness category in the scoring criteria.

Group 3: Other CMAQ eligible projects.

8. Flexible Congestion Relief (FCR) funds (which are bid for on a separate list by the CMAs) will be programmed according to the following two rules:

   a. Funding Equity. The equitable distribution of FCR funds to counties is largely directed by the statewide county minimum formula. (System expansions can be appropriate uses of STP Guarantee funds.)

   b. Strategic Programming. FCR projects are for FY 2000 and FY 2001 and will be programmed according to criteria which will promote congestion relief and will be attractive from a statewide programming standpoint.

   (Project components can be submitted for both the STP/CMAQ and FCR lists, and a CMA may submit a combined list. Alternatively, a CMA may submit two separate project lists. The STP/CMAQ projects are for FY 95, FY 96 and FY 97, and scored according to criteria which emphasize system preservation and efficient operation. FCR projects are for FY 2000 and FY 2001 and while being scored according to the established weights, will be programmed according to criteria which value promotion of congestion relief, and are likely to be funded by the CTC.)

9. Programming consideration may be given to those projects that score well and leverage a high level of non-federal resources, including private sector funds.

10. Programming consideration may be given to projects that score well and promote multi-jurisdictional cooperation or have multi-jurisdictional benefits.

Metropolitan Transportation Commission
1995 TIP/1994 RTIP
Bicycle / Pedestrian Project Application
(fill out one form for each project)

1. PROJECT SPONSOR:

This application was prepared by: _____ Phone: _____

Agency:_____FAX: _____

Sponsoring Agency: _____Date: _____

Implementing Agency: _____

Operating Agency: _____

2. PROJECT IDENTIFICATION:

Project Title: _____

Location: County: _____ City/Town: _____

Brief Project Description (route/definition): _____

_____

3. STATUS OF ENVIRONMENTAL/AIR QUALITY DOCUMENT: Type: _____

❑ NEPA ❑ CEQA

❑ C.E ❑ FONSI ❑ Neg. Dec. ❑ EIR ❑ EIS ❑ Exempt (_____)
Estimated date of completion: _____

4. FUNDING REQUEST SUMMARY:

❑ STP/CMAQ ❑ FCR (RTIP/STIP)

Escalated dollars - escalation factor is 5% per year

use exact dollars; do not round to nearest thousand *request fiscal year*

$	STP/CMAQ/RTIP Request *(total escalated dollars)*	
$	TSM Match *(total escalated dollars)*	
$	Other Local Match *(total escalated dollars)*	
$	Funds from other sources *(total escalated dollars)*	
$	**Total project cost** *(total escalated dollars)*	

5. PROJECT APPLICATION

❑ is being submitted through the _____ CMA

❑ is also being submitted to MTC as a regional project (must also be submitted to CMA)

CMA USE ONLY

CMA Rank:_____ of_____ *CMA Contact:_____* *phone:_____*

6. **PROJECT TYPE:**
- ❑ Class I bikeway - separated ROW
- ❑ Roadway improvement (includes Class II Bikeway Improvements) for bike or pedestrian access
- ❑ Transit improvement for bike or pedestrian access
- ❑ Other _____

7. **PROJECT DESCRIPTION:** _____

_____

_____

_____

8. **Is this project on the currently defined MTS?** ❑ Yes ❑ No

If no, describe how project benefits the MTS: _____

_____

_____

9. **Is this a capital replacement or rehabilitation?** ❑ Yes ❑ No

If yes, please cite results of Management Systems (i.e., document title and page numbers) that indicate need for replacement or rehabilitation _____

This rehabilitation will prolong the useful life of this asset by _____ years.

o Project is NOT based on a Management System.

10. **Is any part of this project a seismic retrofit?** ❑ Yes ❑ No

If yes, please describe: _____

_____

11. **Will this project prevent an unacceptable breakdown in the MTS?** ❑ Yes ❑ No

12. **Will this project address an existing safety/security problem?** ❑ Yes ❑ No

Total number of accidents over last 3 years: _____ of which _____ were fatal.

Total number of passenger/employee/citizen complaints over past 3 years: _____

If no, is this project a pro-active measure that will avoid potential safety/securty problems? ❑ Yes ❑ No

Please describe how: _____

_____

13. Does the project include any other transportation system components?

❑ Pedestrian walks	❑ Where none currently exist?	____% of project
❑ Other Ped amenities	❑ Where none currently exist?	____% of project
❑ Bike lanes	❑ Where none currently exist?	____% of project
❑ Signalization	❑ Where none currently exist?	____% of project
❑ Signage	❑ Where none currently exist?	____% of project
❑ Lighting	❑ Where none currently exist?	____% of project
❑ Other:_____	❑ Where none currently exist?	____% of project

14 (a). Will there be any annual travel time savings as a result of this project? ❑ Yes ❑ No

_____ passenger hours saved/year

How did you calculate the savings? _____

_____

14 (b). Will there be any annual operating cost savings as a result of this project? ❑ Yes ❑ No

_____ annual operating cost savings

How did you calculate the savings? _____

_____

14 (c). What is the cost effectiveness ration for this project? ❑ Yes ❑ No

_____ cost effectiveness ratio

How did you calculate the cost effectiveness ratio? _____

_____

15. Will this project serve transportation purposes such as trips to work, school, shopping, and other activity centers rather than recreational trips?

❑ Yes ❑ No

If yes, how? To what degree? _____

_____

16. Will this project improve MTS system operations? ❑ Yes ❑ No

If yes, how? To what degree? _____

_____

17. Is this a gap-closure project? ❑ Yes ❑ No

Explain: _____

_____

18. PROJECT LOCATION

❑ **Roadway Project:**
Route Number:_____. (County/State/Interstate) if applicable
Jurisdictions affected:_____.
Public street name: _____. if applicable

❑ **Transit Project:**
Transit rail line:_____. (Operator/line) if applicable
Jurisdictions or transit or railway lines affected:_____. if applicable

19. PROJECT BOUNDARIES

Project begins at (nearest intersection/cross street/line mile):_____.
Project ends at (nearest intersection/cross street/line mile):_____.
(PLEASE ATTACH A CLEARLY LABELED VICINITY MAP AND EXISTING AND PROPOSED CROSS-SECTIONS)

20. TRAFFIC CONDITIONS

As applicable, attach a clearly labeled cross section, or configuration diagram showing current conditions and proposed changes.

Please quantify traffic information below (i.e., level of congestion or peaking)

_____.
_____.

21. PLANNING JUSTIFICATION

Is this project included in a current, adopted transportation/land use planning document? ❑ Yes ❑ No

If yes, cite document and pages: _____

_____

Is this project consistent with the Regional Transportation Plan (RTP)? ❑ Yes ❑ No

22. **PROJECT JUSTIFICATION NARRATIVE:** ***Describe the impact this project will have on maintaining or improving service, relieving congestion, improving safety, and improving air quality. Are there any other environmental benefits of the project? What would be the net impact of implementing the project? What is the facility, and how would it meet established needs and purposes?***

attach additional sheets if necessary

23. Does this project address at least one of the ISTEA "fifteen factors'?

❑ Yes ❑ No

(please check all that apply to this project):

- ❑ Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently;
- ❑ Consistency of transportation planning with applicable Federal, State, and local energy conservation programs, goals, and objectives;
- ❑ The need to relieve congestion and prevent congestion from occurring where it does not yet occur;
- ❑ The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short and long term land use and development plans;
- ❑ The programming of expenditure on transportation enhancement activities as required in section 133, which defines transportation enhancement activities for the purpose of funding under the STP as "the provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, facilities and canals, preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff.";
- ❑ The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such projects are publicly funded;
- ❑ International border crossings and access to ports, airports, intermodal facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations;
- ❑ The need for connectivity of roads within the metropolitan area with roads outside the metropolitan area;
- ❑ The transportation needs identified through the use of the management systems required by section 303 of this title;
- ❑ The preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way what may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss;
- ❑ Methods to enhance the efficient movement of freight;
- ❑ The use of life cycle costs in the design and engineering of bridges, tunnels, or pavement;
- ❑ The overall social, economic, energy, and environmental effects of transportation decisions;
- ❑ Methods to expand and enhance transit services and to increase the use of such services;
- ❑ Capital investments that would result in increased security in transit systems.

24. TRANSPORTATION CONTROL MEASURES (TCMs)

Indicate whether the project can be catagorized entirely or in part as either a Federal TCM (FTCM) or a State TCM (STCM) and how much of the project can be considered a TCM..

Most Effective TCMs	*Entire Project*	*Significant Part*	*Minor Part*
Signal timing (FTCM 24 & 25)	❑	❑	❑
Market based measures (STCM 22)	❑	❑	❑
Ozone Excess No Drive Days (STCM 23)	❑	❑	❑
Highly Effective TCMs			
Incident management (FTCM 26)	❑	❑	❑
Employer based Trip Reduction Rule (STCM 2)	❑	❑	❑
Install Traffic Operations System (STCM 11)	❑	❑	❑
Implement Revenue Measures (STCM 21)	❑	❑	❑
Moderately Effective TCMs			
Regional Transit Coordination (FTCM 21)	❑	❑	❑
Expand & improve public transit (FTCM 3)	❑	❑	❑
Improve transit service (STCM 3)	❑	❑	❑
Expand regional rail system (STCM 4)	❑	❑	❑
Improve arterial traffic flow (STCM 3)	❑	❑	❑
Indirect source control program (STCM 16)	❑	❑	❑
Marginally Effective TCMs			
Upgrade Caltrain service (FTCM 19)	❑	❑	❑
Regional HOV system plan (FTCM 20)	❑	❑	❑
Park & Ride lots (FTCM 7, 8)	❑	❑	❑
Employer audits (FTCM 23)	❑	❑	❑
Local TSM initiative (FTCM 28)	❑	❑	❑
All other FTCMs; all other STCMs	❑	❑	❑

Use the space below for any appropriate explanation *(attach additional sheets as necessary):*

25. FINANCIAL PLAN

Estimated total cost of project: $_____ current $_____ escalated

Please complete the following expenditure table using ESCALATED dollars.

Use an escalation factor of 5% per year.
Fiscal years are federal fiscal years.

Fund Source	TOTAL 1993 $'s	FY 94-95	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	TOTAL Escalated
STP/CMAQ	$	$	$	$	$	$	$	$	$
Other Federal: _____	$	$	$	$	$	$	$	$	$
State FCR/RTIP	$	$	$	$	$	$	$	$	$
State TSM (max 11.5%)	$	$	$	$	$	$	$	$	$
Other State: _____	$	$	$	$	$	$	$	$	$
Local Match	$	$	$	$	$	$	$	$	$
Other Source: _____	$	$	$	$	$	$	$	$	$
TOTAL	$	$	$	$	$	$	$	$	$

Please complete the following Project Budget/Implementation schedule:

For each task (ie, PE, ROW, Construction), place a dollar amount in the appropriate column

Task	FY 94-95	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01
P.E.							
ROW							
Const.							

Does this project require an ongoing operational budget? ❑ Yes ❑ No

If yes, please describe the source(s) of those operating funds: _____

TRAFFIC CONDITIONS - Parallel Routes - OPTIONAL

As applicable, attach a clearly labeled cross section , lane configuration , or ramp configuration diagram showing current conditions and proposed changes.

Provide complete traffic information below. Attach any relevent supporting documentation.

Average Daily Traffic (ADT)

Approach	Current ADT	% in Peak	% Trucks
Northbound			
Southbound			
Eastbound			
Westbound			

Source of ADT data: _____ Date collected: _____

Level of Service:

Intersection: _____ ❑ AM Peak ❑ PM Peak

Current Conditions: Peak Period LOS: **A B C D E F** *(circle one)*

Projected w/project: Peak Period LOS: **A B C D E F** *(circle one)*

Corridor/Fwy Segment: _____ ❑ AM Peak ❑ PM Peak

Current Conditions: Peak Period LOS: **A B C D E F** *(circle one)*

Projected w/project: Peak Period LOS: **A B C D E F** *(circle one)*

Method of LOS calculation *(must be consistent with local CMA adopted methodolgy)*: _____

Current Avg Vehicle Occupancy Rate during Peak (if available): _____

Source: _____

Metropolitan Transportation Commission
1995 TIP/1994 RTIP
Transit Project Application
(fill out one form for each project)

1. PROJECT SPONSOR:

This application was prepared by: _____ Phone: _____

Agency: _____ FAX: _____

Sponsoring Agency: _____ Date: _____

Implementing Agency: _____

Operating Agency: _____

2. PROJECT IDENTIFICATION:

Project Title: _____
(please repeat this project title in the header at the top of each page of this application)

Location: County: _____ City/Town: _____

Brief Project Description (route/definition): _____

_____

3. STATUS OF ENVIRONMENTAL/AIR QUALITY DOCUMENT: Type: _____

❑ NEPA ❑ CEQA
❑ C.E ❑ FONSI ❑ Neg. Dec. ❑ EIR ❑ EIS ❑ Exempt (_____)

Estimated date of completion: _____

4. FUNDING REQUEST SUMMARY: ❑ STP/CMAQ ❑ FCR (RTIP/STIP)

Escalated dollars - escalation factor is 5% per year

use exact dollars; do not round to nearest thousand *request fiscal year*

$	STP/CMAQ/RTIP Request *(total escalated dollars)*	
$	TSM Match *(total escalated dollars)*	
$	Other Local Match *(total escalated dollars)*	
$	Funds from other sources *(total escalated dollars)*	
$	TOTAL PROJECT COST *(total escalated dollars)*	

5. Project Application

❑ is being submitted through the _____ CMA
❑ is also being submitted to MTC as a regional project (must also be submitted to CMA)

CMA USE ONLY

CMA Rank: _____ *of* _____ *CMA Contact:* _____ *phone:*

6. PROJECT TYPE:

- ❑ Heavy Rail
- ❑ Light Rail
- ❑ Bus
- ❑ Ferry
- ❑ Paratransit
- ❑ Shuttle Bus/Van
- ❑ ADA/Accessibility
- ❑ Station/Multi Modal Facility
- ❑ Passenger Amenities
- ❑ Park & Ride Facility
- ❑ System Facilities/Equipment
- ❑ ROW
- ❑ Other _____
- ❑ Alt. Fuel

7. PROJECT DESCRIPTION: _____

_____

_____

_____

8. Is this project on the currently defined MTS? ❑ Yes ❑ No

If no, describe how project benefits the MTS: _____

_____

_____

9. Is this a capital replacement or rehabilitation? ❑ Yes ❑ No

Asset Class: _____ Asset Age: _____ years

Is replacement/rehab based on a Short Range Transit Plan? ❑ Yes ❑ No

If yes, please cite document title and page numbers: _____

This rehabilitation will prolong the useful life of this asset by _____ years.

10. Is any part of this project a seismic retrofit? ❑ Yes ❑ No

If yes, please describe: _____

_____

11. Will this project prevent an unacceptable breakdown in current transit service? ❑ Yes ❑ No

12. Will this project address an existing safety/security problem? ❑ Yes ❑ No

Total number of accidents over last 3 years: _____ of which _____ were fatal.

Total number of passenger/employee/citizen complaints over past 3 years: _____

If no, is this project a pro-active measure that will avoid potential safety/securty problems? ❑ Yes ❑ No

Please describe how: _____

_____

13. PASSENGER USE *(complete as appropriate)*

Use Measure	Actual	w/Project
Avg Daily Ridership (system wide)		
Avg Daily Ridership (line/route)		
Avg Peak Hour Ridership (system wide)		
Avg Peak Hour Ridership (line/route)		
Load Factor (pax/rev veh) system wide		
Load Factor (psgrs/vol/cap) line/route		
Avg Daily Passenger Entries (station)		
Avg Peak Hour Passenger Entries (station)		

14. LEVEL OF SERVICE:

Use Measure	Actual	w/Project
Avg Peak Hour Headway/Frequency (system wide)		
Avg Peak Hour Headway/Frequency (line/route)		

15 (a). Will there be any annual travel time savings as a result of this project? ❑ Yes ❑ No

_____ passenger hours saved/year

How did you calculate the savings? _____

_____

15 (b). Will there be any annual operating cost savings as a result of this project? ❑ Yes ❑ No

_____ annual operating cost savings

How did you calculate the savings? _____

_____

15 (c). What is the cost effectiveness ration for this project? ❑ Yes ❑ No

_____ cost effectiveness ratio

How did you calculate the cost effectiveness ratio? _____

_____

16. Will this project increase service capacity? ❑ Yes ❑ No

If yes, how? _____

_____

17. Will this project improve service reliability? ❑ Yes ❑ No

If yes, how? _____

_____

18. Will this project improve passenger comfort/convenience? ❑ Yes ❑ No

If yes, how? _____

_____

19. Will this project improve system operations? ❑ Yes ❑ No

If yes, how? _____

_____

20. Is this a gap-closure project? ❑ Yes ❑ No

Explain: _____

_____

21. PLANNING JUSTIFICATION

Is this project included in a current, adopted transportation/land use planning document? ❑ Yes ❑ No

If yes, cite document and pages: _____

_____

Is this project consistent with the Regional Transportation Plan (RTP)? ❑ Yes ❑ No

Is this project currently included in MTC Resolution 1876? ❑ Yes ❑ No

22. List any ADA (Americans with Disabilities Act) components of this project and estimate the percentage of the project they represent:

_____

_____

_____

_____

23. PROJECT JUSTIFICATION NARRATIVE: ***Describe the impact this project will have on maintaining or improving transit service, relieving congestion, improving safety, and improving air quality.***

attach additional sheets if necessary

24. Does this project address at least one of the ISTEA "fifteen factors"? ❑ Yes ❑ No

(please check all that apply to this project):

- ❑ Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently;
- ❑ Consistency of transportation planning with applicable Federal, State, and local energy conservation programs, goals, and objectives;
- ❑ The need to relieve congestion and prevent congestion from occurring where it does not yet occur;
- ❑ The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short and long term land use and development plans;
- ❑ The programming of expenditure on transportation enhancement activities as required in section 133, which defines transportation enhancement activities for the purpose of funding under the STP as "the provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, facilities and canals, preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff.";
- ❑ The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such projects are publicly funded;
- ❑ International border crossings and access to ports, airports, intermodal facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations;
- ❑ The need for connectivity of roads within the metropolitan area with roads outside the metropolitan area;
- ❑ The transportation needs identified through the use of the management systems required by section 303 of this title;
- ❑ The preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way what may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss;
- ❑ Methods to enhance the efficient movement of freight;
- ❑ The use of life cycle costs in the design and engineering of bridges, tunnels, or pavement;
- ❑ The overall social, economic, energy, and environmental effects of transportation decisions;
- ❑ Methods to expand and enhance transit services and to increase the use of such services;
- ❑ Capital investments that would result in increased security in transit systems.

25. TRANSPORTATION CONTROL MEASURES (TCMs)

Indicate whether the project can be catagorized entirely or in part as either a Federal TCM (FTCM) or a State TCM (STCM) and how much of the project can be considered a TCM..

Most Effective TCMs	***Entire Project***	***Significant Part***	***Minor Part***
Signal timing (FTCM 24 & 25)	❑	❑	❑
Market based measures (STCM 22)	❑	❑	❑
Ozone Excess No Drive Days (STCM 23)	❑	❑	❑
Highly Effective TCMs			
Incident management (FTCM 26)	❑	❑	❑
Employer based Trip Reduction Rule (STCM 2)	❑	❑	❑
Install Traffic Operations System (STCM 11)	❑	❑	❑
Implement Revenue Measures (STCM 21)	❑	❑	❑
Moderately Effective TCMs			
Regional Transit Coordination (FTCM 21)	❑	❑	❑
Expand & improve public transit (FTCM 3)	❑	❑	❑
Improve transit service (STCM 3)	❑	❑	❑
Expand regional rail system (STCM 4)	❑	❑	❑
Improve arterial traffic flow (STCM 3)	❑	❑	❑
Indirect source control program (STCM 16)	❑	❑	❑
Marginally Effective TCMs			
Upgrade Caltrain service (FTCM 19)	❑	❑	❑
Regional HOV system plan (FTCM 20)	❑	❑	❑
Park & Ride lots (FTCM 7, 8)	❑	❑	❑
Employer audits (FTCM 23)	❑	❑	❑
Local TSM initiative (FTCM 28)	❑	❑	❑
All other FTCMs; all other STCMs	❑	❑	❑

Use the space below for any appropriate explanation *(attach additional sheets as necessary)**:***

26. FINANCIAL PLAN

Estimated total cost of project: $_____ current $_____ escalated

Please complete the following expenditure table using ESCALATED dollars.

Use an escalation factor of 5% per year.
Fiscal years are federal fiscal years.

Fund Source	TOTAL 1993 $'s	FY 94-95	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	TOTAL Escalated
STP/CMAQ	$	$	$	$	$	$	$	$	$
Other Federal: _____	$	$	$	$	$	$	$	$	$
State FCR/RTIP	$	$	$	$	$	$	$	$	$
State TSM (max 11.5%)	$	$	$	$	$	$	$	$	$
Other State: _____	$	$	$	$	$	$	$	$	$
Local Match	$	$	$	$	$	$	$	$	$
Other Source: _____	$	$	$	$	$	$	$	$	$
TOTAL	$	$	$	$	$	$	$	$	$

Please complete the following Project Budget/Implementation schedule:

For each task (ie, PE, ROW, Construction), place a dollar amount in the appropriate column

Task	FY 94-95	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01
P.E.							
ROW							
Const.							

Does this project require an ongoing operational budget? ❑ Yes ❑ No

If yes, please describe the source(s) of those operating funds: _____

TRAFFIC CONDITIONS - Parallel Routes - OPTIONAL

As applicable, attach a clearly labeled cross section , lane configuration , or ramp configuration diagram showing current conditions and proposed changes.

Provide complete traffic information below. Attach any relevent supporting documentation.

Average Daily Traffic **(ADT)**

Approach	Current ADT	% in Peak	% Trucks
Northbound			
Southbound			
Eastbound			
Westbound			

Source of ADT data: _____ Date collected:_____

Level of Service:

Intersection: _____ ❑ AM Peak ❑ PM Peak

Current Conditions: Peak Period LOS: **A B C D E F** *(circle one)*

Projected w/project: Peak Period LOS: **A B C D E F** *(circle one)*

Corridor/Fwy Segment: _____ ❑ AM Peak ❑ PM Peak

Current Conditions: Peak Period LOS: **A B C D E F** *(circle one)*

Projected w/project: Peak Period LOS: **A B C D E F** *(circle one)*

Method of LOS calculation ***(must be consistent with local CMA adopted methodolgy)***: _____

Current Avg Vehicle Occupancy Rate during Peak (if available): _____

Source: _____

Metropolitan Transportation Commission
1995 TIP/1994 RTIP
Intermodal/Freight Project Application

1. PROJECT SPONSOR:

This application was prepared by: _____ Phone: _____

Agency: _____ FAX: _____

Sponsoring Agency: _____ Date: _____

Implementing Agency: _____

Operating Agency: _____

2. PROJECT IDENTIFICATION:

Project Title: _____

(please repeat this project title at the top of each page of this application)

Location: COUNTY: _____ City/Town: _____

Brief Project Description (route/post miles): _____

_____

3. STATUS OF ENVIRONMENTAL/AIR QUALITY DOCUMENT: Type: _____

❑ NEPA ❑ CEQA
❑ C.E ❑ FONSI ❑ Neg. Dec. ❑ EIR ❑ EIS ❑ Exempt (_____)
Estimated date of completion: _____

4. FUNDING REQUEST SUMMARY: ❑ STP/CMAQ ❑ FCR (RTIP/STIP)

Escalated dollars - escalation factor is 5% per year

use exact dollars; do not round to nearest thousand *request fiscal year*

$	STP/CMAQ/RTIP Request *(total escalated dollars)*	
$	TSM Match *(total escalated dollars)*	
$	Other Local Match *(total escalated dollars)*	
$	Funds from other sources *(total escalated dollars)*	
$	TOTAL PROJECT COST *(total escalated dollars)*	

(should match totals from Financial Plan)

5. Project Application

❑ is being submitted through the _____ CMA
❑ is being submitted directly to MTC as a regional project (must also be submitted to CMA)

CMA USE ONLY

CMA Rank: _____ *of* _____ *CMA Contact:* _____ *phone:* _____
Guarantee project

6. PROJECT MODE: ❑ Rail
❑ Roadway
❑ Intermodal Facility
❑ Air
❑ Water ❑ Other _____

7. PROJECT DESCRIPTION: _____

_____

_____

_____

8. Is this project on the currently defined MTS? ❑ Yes ❑ No

If no, describe how project benefits the MTS: _____

_____

_____

9. Is this a capital replacement or rehabilitation? ❑ Yes ❑ No

If yes, please cite results of Management Systems (i.e., document title and page numbers) that indicate need for replacement or rehabilitation _____

This rehabilitation will prolong the useful life of this asset by _____ years.

❑ Project is NOT based on a Management System.

10. Is any part of this project a seismic retrofit? ❑ Yes ❑ No

If yes, please describe: _____

_____

11. Will this project prevent an unacceptable breakdown in current transportation service? ❑ Yes ❑ No

12. Will this project address an existing safety/security problem? ❑ Yes ❑ No

Total number of accidents over last 3 years: _____ of which _____ were fatal.

Total number of passenger/employee/citizen complaints over past 3 years: _____

If no, is this project a pro-active measure that will avoid potential safety/securty problems? ❑ Yes ❑ No

Please describe how: _____

_____

13. Does this project increase capacity and/or efficiency for freight movements? ❑ Yes ❑ No

Use Measure	Actual	w/Project
Capacity : Cargo throughput in tons		
Efficiency: Cargo throughput per hour in tons		

14. Does the project include any other transportation system components?

❑ Pedestrian walks	❑ Where none currently exist?	____% of project
❑ Other Ped amenities	❑ Where none currently exist?	____% of project
❑ Bike lanes	❑ Where none currently exist?	____% of project
❑ Signage	❑ Where none currently exist?	____% of project
❑ Lighting	❑ Where none currently exist?	____% of project
❑ Other:_____	❑ Where none currently exist?	____% of project

(such as boat ramps, transit improvements, historic preservation, wetlands mitigation)

15 (a). Will there be any annual travel time savings as a result of this project? ❑ Yes ❑ No

_____ passenger hours saved/year

How did you calculate the savings? _____

_____

15 (b). Will there be any annual operating cost savings as a result of this project? ❑ Yes ❑ No

_____ annual operating cost savings

How did you calculate the savings? _____

_____

15 (c). What is the cost effectiveness ration for this project? ❑ Yes ❑ No

_____ cost effectiveness ratio

How did you calculate the cost effectiveness ratio? _____

_____

16. Will this project increase roadway or transit service capacity? ❑ Yes ❑ No

If yes, how? _____

_____

17. Will this project improve roadway or transit service reliability/efficiency? ❑ Yes ❑ No

If yes, how? _____

_____

18. Will this project improve transit comfort/convenience? ❑ Yes ❑ No

If yes, how? _____

_____

19. Will this project improve MTS system operations? ❑ Yes ❑ No

If yes, how? _____

_____

20. Is this a gap-closure project? ❑ Yes ❑ No

Explain: _____

_____

21. PROJECT LOCATION (PLEASE ATTACH A CLEARLY LABELED VICINITY MAP)

❑ **Roadway Project:**
Route Number:_____. (County/State/Interstate) if applicable
Jurisdictions or railway lines affected:_____. if applicable
Public street name: _____. if applicable

❑ **Rail Project:**
Transit rail ine:_____. (Operator/line) if applicable
Jurisdictions or transit or railway lines affected:_____. if applicable

22. PROJECT BOUNDARIES

Project begins at (nearest intersection/cross street/line mile):_____.
Project ends at (nearest intersection/cross street/line mile):_____.

23. TRAFFIC CONDITIONS

As applicable, attach a clearly labeled cross section, or configuration diagram showing current conditions and proposed changes.

Please quantify traffic information below (i.e., gate operations, train crossings, containers or trucks movements, level of congestion or peaking)

_____.

_____.

24. PLANNING JUSTIFICATION

Is this project included in a current, adopted transportation/land use planning document? ❑ Yes ❑ No

If yes, cite document and pages: _____

_____

Is this project consistent with the Regional Transportation Plan (RTP)? ❑ Yes ❑ No

25. PROJECT JUSTIFICATION NARRATIVE:

Describe the impact this project will have on maintaining or improving service, relieving congestion, improving safety, and improving air quality. Are there any other environmental benefits of the project? What would be the net impact of implementing the project?

attach additional sheets if necessary

26. Does this project address at least one of the ISTEA "fifteen factors"?

❑ Yes ❑ No

***(please check all that apply to this project)*:**

❑ Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently;

❑ Consistency of transportation planning with applicable Federal, State, and local energy conservation programs, goals, and objectives;

❑ The need to relieve congestion and prevent congestion from occurring where it does not yet occur;

❑ The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short and long term land use and development plans;

❑ The programming of expenditure on transportation enhancement activities as required in section 133, which defines transportation enhancement activities for the purpose of funding under the STP as "the provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, facilities and canals, preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff.";

❑ The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such projects are publicly funded;

❑ International border crossings and access to ports, airports, intermodal facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations;

❑ The need for connectivity of roads within the metropolitan area with roads outside the metropolitan area;

❑ The transportation needs identified through the use of the management systems required by section 303 of this title;

❑ The preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way what may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss;

❑ Methods to enhance the efficient movement of freight;

❑ The use of life cycle costs in the design and engineering of bridges, tunnels, or pavement;

❑ The overall social, economic, energy, and environmental effects of transportation decisions;

❑ Methods to expand and enhance transit services and to increase the use of such services;

❑ Capital investments that would result in increased security in transit systems.

27. TRANSPORTATION CONTROL MEASURES (TCMs)

Indicate whether the project can be categorized entirely or in part as either a Federal TCM (FTCM) or a State TCM (STCM) and how much of the project can be considered a TCM..

Most Effective TCMs	*Entire Project*	*Significant Part*	*Minor Part*
Signal timing (FTCM 24 & 25)	❑	❑	❑
Market based measures (STCM 22)	❑	❑	❑
Ozone Excess No Drive Days (STCM 23)	❑	❑	❑
Highly Effective TCMs			
Incident management (FTCM 26)	❑	❑	❑
Employer based Trip Reduction Rule (STCM 2)	❑	❑	❑
Install Traffic Operations System (STCM 11)	❑	❑	❑
Implement Revenue Measures (STCM 21)	❑	❑	❑
Moderately Effective TCMs			
Regional Transit Coordination (FTCM 21)	❑	❑	❑
Expand & improve public transit (FTCM 3)	❑	❑	❑
Improve transit service (STCM 3)	❑	❑	❑
Expand regional rail system (STCM 4)	❑	❑	❑
Improve arterial traffic flow (STCM 3)	❑	❑	❑
Indirect source control program (STCM 16)	❑	❑	❑
Marginally Effective TCMs			
Upgrade Caltrain service (FTCM 19)	❑	❑	❑
Regional HOV system plan (FTCM 20)	❑	❑	❑
Park & Ride lots (FTCM 7, 8)	❑	❑	❑
Employer audits (FTCM 23)	❑	❑	❑
Local TSM initiative (FTCM 28)	❑	❑	❑
All other FTCMs; all other STCMs	❑	❑	❑

Use the space below for any appropriate explanation *(attach additional sheets as necessary):*

28. FINANCIAL PLAN

Estimated total cost of project: $_____ current $_____ escalated

Please complete the following expenditure table using ESCALATED dollars.

Use an escalation factor of 5% per year.
Fiscal years are federal fiscal years.

Fund Source	TOTAL 1993 $'s	FY 94-95	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	TOTAL Escalated
STP/CMAQ	$	$	$	$	$	$	$	$	$
Other Federal: _____	$	$	$	$	$	$	$	$	$
State FCR/RTIP	$	$	$	$	$	$	$	$	$
State TSM (max 11.5%)	$	$	$	$	$	$	$	$	$
Other State: _____	$	$	$	$	$	$	$	$	$
Local Match	$	$	$	$	$	$	$	$	$
Other Source: _____	$	$	$	$	$	$	$	$	$
TOTAL	$	$	$	$	$	$	$	$	$

Please complete the following Project Budget/Implementation schedule:

For each task (ie, PE, ROW, Construction), place a dollar amount in the appropriate column

Task	FY 94-95	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01
P.E.							
ROW							
Const.							

Does this project require an ongoing operational budget? ❑ Yes ❑ No

If yes, please describe the source(s) of those operating funds: _____

TRAFFIC CONDITIONS - Parallel Routes - OPTIONAL

As applicable, attach a clearly labeled cross section , lane configuration , or ramp configuration diagram showing current conditions and proposed changes.

Provide complete traffic information below. Attach any relevent supporting documentation.

	Approach	Current ADT	% in Peak	% Trucks
Average Daily Traffic (ADT)	*Northbound*			
	Southbound			
	Eastbound			
	Westbound			

Source of ADT data: _____ Date collected: _____

Level of Service:

Intersection: _____ ❑ AM Peak ❑ PM Peak

Current Conditions: Peak Period LOS: **A B C D E F** *(circle one)*

Projected w/project: Peak Period LOS: **A B C D E F** *(circle one)*

Corridor/Fwy Segment: _____ ❑ AM Peak ❑ PM Peak

Current Conditions: Peak Period LOS: **A B C D E F** *(circle one)*

Projected w/project: Peak Period LOS: **A B C D E F** *(circle one)*

Method of LOS calculation ***(must be consistent with local CMA adopted methodolgy)*:** _____

Current Avg Vehicle Occupancy Rate during Peak (if available): _____

Source: _____

Metropolitan Transportation Commission
1995 TIP/1994 RTIP
Roadway Project Application
(fill out one form for each project)

1. PROJECT SPONSOR:

This application was prepared by: _____ Phone: _____

Agency: _____ FAX: _____

Sponsoring Agency: _____ Date: _____

Implementing Agency: _____

Operating Agency: _____

2. PROJECT IDENTIFICATION:

Project Title: _____
(please repeat this project title at the top of each page of this application)

Location: COUNTY: _____ City/Town: _____

Brief Project Description (route/post miles): _____

_____

3. STATUS OF ENVIRONMENTAL/AIR QUALITY DOCUMENT: Type: _____

❑ NEPA ❑ CEQA
❑ C.E ❑ FONSI ❑ Neg. Dec. ❑ EIR ❑ EIS ❑ Exempt (_____)
Estimated date of completion: _____

4. FUNDING REQUEST SUMMARY: ❑ STP/CMAQ ❑ FCR (RTIP/STIP)

Escalated dollars - escalation factor is 5% per year

use exact dollars; do not round to nearest thousand *request fiscal year*

$	STP/CMAQ/RTIP Request *(total escalated dollars)*	
$	TSM Match *(total escalated dollars)*	
$	Other Local Match *(total escalated dollars)*	
$	Funds from other sources *(total escalated dollars)*	
$	TOTAL PROJECT COST *(total escalated dollars)*	

(should match totals from Financial Plan)

5. Project Application
❑ is being submitted through the _____ CMA
❑ is being submitted directly to MTC as a regional project (must also be submitted to CMA)

CMA USE ONLY

CMA Rank: _____ of _____ *CMA Contact: _____ phone: _____*
Guarantee project

6. **PROJECT TYPE:** *(check all that apply)*

❑ Freeway	❑ Expressway	❑ Aux Lane	❑ Restripe
❑ Arterial	❑ Collector	❑ Bridge	❑ ROW
❑ Widening	❑ New/Extension	❑ Overlay	
❑ Ramp Metering	❑ New Signal	❑ Signal Interconnect	
❑ Interchange	❑ Turn lanes	❑ Incident Management	

❑ Other _____

7. **PROJECT DESCRIPTION** ***(attach all appropriate diagrams, maps, schematic drawings)*:**

_____

_____

_____

8. **Is this project on the currently defined MTS?** ❑ Yes ❑ No

If no, describe how project benefits the MTS: _____

_____

_____

9. **Is this a replacement or rehabilitation project?** ❑ Yes ❑ No

If yes, please cite results of Management System (i.e., PMS) that indicate need for replacement or rehabilitation: _____

_____

This project is NOT based on a Management System.

10. **Is any part of this project a seismic retrofit?** ❑ Yes ❑ No

If yes, please describe: _____

_____

11. **Will this project prevent an unacceptable breakdown in the ability of the MTS to carry traffic?** ❑ Yes ❑ No

12. **Will this project address an existing safety problem?** ❑ Yes ❑ No

Total number of accidents over last 3 years: _____ of which _____ were fatal.

Total number of complaints over past 3 years: _____

If no, is this project a pro-active measure that will avoid potential safety/securty problems? ❑ Yes ❑ No

Please describe how: _____

_____

13. Does this project increase capacity for Single Occupant Vehicles? ❑ Yes ❑ No

If yes, is the project justification now or will it be supported by a project-level NEPA Analysis? ❑ Yes ❑ No

14. Does this project include :

❑ Signal Actuation	❑ Where none currently exist?	_____ % of project
❑ HOV Lanes	❑ Where none currently exist?	_____ % of project
❑ HOV by-pass	❑ Where none currently exist?	_____ % of project
❑ Ramp metering	❑ Where none currently exist?	_____ % of project
❑ Pedestrian walks	❑ Where none currently exist?	_____ % of project
❑ Other ped amenities	❑ Where none currently exist?	_____ % of project
❑ Bike lanes	❑ Where none currently exist?	_____ % of project
❑ Signage	❑ Where none currently exist?	_____ % of project
❑ Lighting	❑ Where none currently exist?	_____ % of project
❑ Signal interconnection	❑ Where none currently exist?	_____ % of project
❑ Other (_____)	❑ Where none currently exist?	_____ % of project

15. Does this project remove and NOT REPLACE any transit, pedestrian, or bicycle facilities? ❑ Yes ❑ No

If yes, explain:_____

_____

16 (a). Will there be any annual travel time savings as a result of this project? ❑ Yes ❑ No

_____ passenger hours saved/year

How did you calculate the savings? _____

_____

16 (b). Will there be any annual operating cost savings as a result of this project? ❑ Yes ❑ No

_____ annual operating cost savings

How did you calculate the savings? _____

_____

16 (c). What is the cost effectiveness ration for this project? ❑ Yes ❑ No

_____ cost effectiveness ratio

How did you calculate the cost effectiveness ratio? _____

_____

17. Is this a gap-closure project? ❑ Yes ❑ No

Explain: _____

_____

18. PLANNING JUSTIFICATION

Is this project included in or consistent with a current, adopted transportation/land use planning document? ❑ Yes ❑ No

If yes, cite document and pages: _____

_____

Is this project consistent with the Regional Transportation Plan (RTP)? ❑ Yes ❑ No

19. PROJECT LOCATION

Route No.: County/State/Interstate *(circle one)* _____

Jurisdictions affected/traversed: _____

Street Name *(if applicable)*: _____

20. PROJECT BOUNDARIES: ❑ City/Area wide ❑ Intersection ❑ Corridor

Caltrans post mile back: _____ Caltrans post mile ahead: _____

Project begins at *(nearest intersection/cross street)*: _____

Project ends at *(nearest intersection/cross street)*: _____

Please attach a clearly labeled vicinity map.

21. TRAFFIC CONDITIONS

As applicable, attach a clearly labeled cross section , lane configuration , or ramp configuration diagram showing current conditions and proposed changes.

Provide complete traffic information below. Attach any relevent supporting documentation.

	Approach	Current ADT	% in Peak	% Trucks
Average Daily Traffic (ADT)	*Northbound*			
	Southbound			
	Eastbound			
	Westbound			

Source of ADT data: _____ Date collected: _____

Level of Service:

Intersection: _____ ❑ AM Peak ❑ PM Peak

Current Conditions: Peak Period LOS: **A B C D E F** *(circle one)*

Projected w/project: Peak Period LOS: **A B C D E F** *(circle one)*

Corridor/Fwy Segment: _____ ❑ AM Peak ❑ PM Peak

Current Conditions: Peak Period LOS: **A B C D E F** *(circle one)*

Projected w/project: Peak Period LOS: **A B C D E F** *(circle one)*

Method of LOS calculation *(must be consistent with local CMA adopted methodolgy)*: _____

Current Avg Vehicle Occupancy Rate during Peak (if available): _____

Source: _____

22. List any ADA (Americans with Disabilities Act) components of this project and estimate the percentage of the project they represent:

_____

_____

_____

_____

23. PROJECT JUSTIFICATION NARRATIVE: ***Describe the impact this project will have on maintaining or improving transit service, relieving congestion, improving safety, and improving air quality.***

attach additional sheets if necessary

24. Does this project address at least one of the ISTEA "fifteen factors"?

❑ Yes ❑ No

***(please check all that apply to this project)*:**

- ❑ Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently;
- ❑ Consistency of transportation planning with applicable Federal, State, and local energy conservation programs, goals, and objectives;
- ❑ The need to relieve congestion and prevent congestion from occurring where it does not yet occur;
- ❑ The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short and long term land use and development plans;
- ❑ The programming of expenditure on transportation enhancement activities as required in section 133, which defines transportation enhancement activities for the purpose of funding under the STP as "the provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, facilities and canals, preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff.";
- ❑ The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such projects are publicly funded;
- ❑ International border crossings and access to ports, airports, intermodal facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations;
- ❑ The need for connectivity of roads within the metropolitan area with roads outside the metropolitan area;
- ❑ The transportation needs identified through the use of the management systems required by section 303 of this title;
- ❑ The preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way what may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss;
- ❑ Methods to enhance the efficient movement of freight;
- ❑ The use of life cycle costs in the design and engineering of bridges, tunnels, or pavement;
- ❑ The overall social, economic, energy, and environmental effects of transportation decisions;
- ❑ Methods to expand and enhance transit services and to increase the use of such services;
- ❑ Capital investments that would result in increased security in transit systems.

25. TRANSPORTATION CONTROL MEASURES (TCMs)

Indicate whether the project can be catagorized entirely or in part as either a Federal TCM (FTCM) or a State TCM (STCM) and how much of the project can be considered a TCM..

Most Effective TCMs	*Entire Project*	*Significant Part*	*Minor Part*
Signal timing (FTCM 24 & 25)	❑	❑	❑
Market based measures (STCM 22)	❑	❑	❑
Ozone excess No Drive Days (STCM 23)	❑	❑	❑
Highly Effective TCMs			
Incident management (FTCM 26)	❑	❑	❑
Employer based Trip Reduction Rule (STCM 2)	❑	❑	❑
Install Traffic Operations System (STCM 11)	❑	❑	❑
Implement Revenue Measures (STCM 21)	❑	❑	❑
Moderately Effective TCMs			
Regional Transit Coordination (FTCM 21)	❑	❑	❑
Expand & improve public transit (FTCM 3)	❑	❑	❑
Improve transit service (STCM 3)	❑	❑	❑
Expand regional rail system (STCM 4)	❑	❑	❑
Improve arterial traffic flow (STCM 12)	❑	❑	❑
Indirect source control program (STCM 16)	❑	❑	❑
Marginally Effective TCMs			
Upgrade Caltrain service (FTCM 19)	❑	❑	❑
Regional HOV system plan (FTCM 20)	❑	❑	❑
Park & Ride lots (FTCM 7, 8)	❑	❑	❑
Employer audits (FTCM 23)	❑	❑	❑
Local TSM initiative (FTCM 28)	❑	❑	❑
All other FTCMs; all other STCMs	❑	❑	❑

Use the space below for any appropriate explanation *(attach additional sheets as necessary)*:

26. FINANCIAL PLAN

Estimated total cost of project: $_____ current $_____ escalated

Please complete the following expenditure table using ESCALATED dollars.

Use an escalation factor of 5% per year.
Fiscal years are federal fiscal years.

Fund Source	TOTAL 1993 $'s	FY 94-95	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	TOTAL Escalated
STP/CMAQ	$	$	$	$	$	$	$	$	$
Other Federal: _____	$	$	$	$	$	$	$	$	$
State FCR/RTIP	$	$	$	$	$	$	$	$	$
State TSM (max 11.5%)	$	$	$	$	$	$	$	$	$
Other State: _____	$	$	$	$	$	$	$	$	$
Local Match	$	$	$	$	$	$	$	$	$
Other Source: _____	$	$	$	$	$	$	$	$	$
TOTAL	$	$	$	$	$	$	$	$	$

Please complete the following Project Budget/Implementation schedule:

For each task (ie, PE, ROW, Construction), place a dollar amount in the appropriate column

Task	FY 94-95	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01
P.E.							
ROW							
Const.							

Does this project require an ongoing operational budget? ❑ Yes ❑ No

If yes, please describe the source(s) of those operating funds: _____

_____

_____

MULTIMODAL SCORING

PROJECT / SPONSOR: _____

TOTAL PROJECT COST:

(escalated)
1994-95

t	PROJECT ELEMENTS (describe)	PERCENT FOR THIS ELEMENT	PROJECT $
1			$0
2			$0
3			$0
4			$0
5			$0
6			$0
	TOTALS	0.0%	$0

CATEGORY 1: MAINTAIN/SUSTAIN THE MTS

t	ENTER PROJECT ELEMENT NUMBER						
t t t	MANAGEMENT SYSTEM	NOT MANAGEMENT SYSTEM	SEISMIC RETRO	UNACCEPT BREAKDOWN	RAW SCORE	ELEMENT MULTIPLIER	SCORE FOR THIS ELEMENT
				TOTAL MAINTAIN/SUSTAIN SCORE >>			0.00

CATEGORY 2: IMPROVE EFFICIENCY AND EFFECTIVENESS OF THE MTS

ENTER PROJECT ELEMENT NUMBER

SAFETY MULTIPLIER	SAFETY IMPACT	SAFETY RAW SCORE	CONG RELIEF MULTIPLIER	CONG RELIEF IMPACT	CONG RELIEF RAW SCORE	FREIGHT INTERMODAL	ELEMENT MULTIPLIER	SCORE FOR THIS ELEMENT

EFFICIENCY AND EFFECTIVENESS RAW SCORE >> 0.00

NORMALIZED COST EFFECTIVENESS SCORE >> 0.00

TOTAL EFFICIENCY AND EFFECTIVENESS SCORE >> 0.00

SAFETY MULTIPLIER

Total Accidents: 90, 91,92	
ADT	
Length of Project, Miles	
Number of Intersections	
Accidents per Million Veh Miles	
Avg. Accidents per Intersection	

COST EFFECTIVENESS SCORE

Value of Travel Time/Hr.	
Annual Travel Time Savings:	
Annual Operating Cost Savings:	
Capital Recovery Factor:	
RAW SCORE:	
Normalizer:	

TRAVEL TIME SAVINGS

current trav time, hrs	
projected trav time, hrs	
savings, hrs	0.0000
AVO	
Peak Period ADT	
Days Per Year of Congestion	
Annual Person Hrs Travel Time Savings	

CATEGORY 3: SYSTEM EXPANSION

ENTER PROJECT ELEMENT NUMBER

DEMAND MULTIPLIER	EXPANSION IMPACT	EXPANSION RAW SCORE	CORRIDOR PRSERVATION	ELEMENT MULTIPLIER	SCORE FOR THIS ELEMENT

TOTAL SYSTEM EXPANSION SCORE >> 0.00

PROJECT: 0

CATEGORY 4: EXTERNAL IMPACTS

t	ENTER PROJECT ELEMENT NUMBER								
t		A I R Q U A L I T Y							
t	5 POINTS FOR FED TCM	MOST EFFECT TCM	HIGH EFFECT TCM	MODR EFFECT TCM	LAND USE	ENGR CONS MODE SHIFT	ADA	ELEMENT MULTIPLIER	SCORE FOR THIS ELEMENT
t									
								TOTAL EXTERNAL IMPACTS SCORE >>	0.00

TOTAL PROJECT SCORE

TOTAL MAINTAIN/SUSTAIN SCORE >>	0.000
TOTAL EFFICIENCY AND EFFECTIVENESS SCORE >>	0.000
TOTAL SYSTEM EXPANSION SCORE >>	0.000
TOTAL EXTERNAL IMPACTS SCORE >>	0.000
TOTAL PROJECT SCORE >>	**0.000**

NOTES:

	A	B	C	D	E
1					
2	**COST-EFFECTIVENESS RATIO CALCULATION FOR ROADWAY PROJECTS**				
3	**Travel Time Savings and Capital Recovery Factor**				
4	*** VERSION 1.1 ***				
5	**ENTER Project Sponsor:**				
6	**ENTER Project Name:**				
7	**I. INTRODUCTION**				
8	One of the Scoring Criteria objectives is to award STP/CMAQ funds to cost-effective projects. This spreadsheet program calculates travel				
9	time savings for highway, arterial, and intersection projects. The program also calculates the capital recovery factor used in the				
10	cost-effectiveness formula. Information on the current facility and its performance, and on the facility as a result of the project and its				
11	anticipated performance is required. Information is entered in the cells outlined with a single line, and the calculations are output in the cells				
12	outlined with a double line. Please review the spreadsheet before begining the data entry. To begin, go to line 15.				
13					
14	**II. DATA INPUTS - Calculation for Value of Travel Time Savings as a Result of the Project**				
15	Is the project an intersection project? ENTER Y or N			0	*If input = Y, Go to line 25 If input = N, Go to line 21*
16	See section A under "Formulas, Assumptions, and Definitions" on last page, for definitions of Roaway pojects and Intersection project.				
17					
18	**CURRENT FACILITY AND PERFORMANCE**				
19					
20	**Roadway Projects ONLY:**				
21	ENTER current length of facility in miles				
22	ENTER current average travel speed on existing facility during congested period				*Go to line 29*
23	**Intersection Projects ONLY:**				
24	ENTER the average time in seconds that vehicles must wait in the queue beyond one				
25	full signal cycle (G+Y+R) to clear the intersection during the period of congestion				*Provide information to support methodology used to*
26	(For unsignalized intersections, enter average stopped delay in seconds during period of congestion).				*determine delay. Go to line 29*
27					
28	**Roadway AND Intersection Projects:**				
29	ENTER current volume per lane on existing facility in vehicles per hour during period of congestion				
30	ENTER number of lanes on facility affected by delay during period of congestion				
31	(For intersections, enter all lanes for all movements affected by delay during period of congestion).				
32	ENTER Average Vehicle Occupancy (AVO) on facility during period of congestion				
33	ENTER current hours of congestion on existing facility, measured as total period of time traffic				
34	flows at less than preferred speed.				
35					**< == Current Person-Hours of Congestion Per Day**
36					
37					
38					
39					

	A	B	C	D	E
40					
41					
42	**FACILITY AS A RESULT OF THE PROJECT AND ANTICIPATED PERFORMANCE**				
43					
44	**Roadway Projects ONLY:**				
45	ENTER length of facility in miles as a result of the project				
46	ENTER anticipated average travel speed on facility during congested period as a result of the project				*Go to line 47*
47	**Intersection Projects ONLY:**				
48	ENTER the average time in seconds that vehicles will need to wait in the queue beyond one				
49	full signal cycle (G+Y+R) to clear the intersection during the period of congestion				*Provide information to support methodology used to*
50	(For unsignalized intersections, enter average stopped delay in seconds during period of congestion).				*determine delay. Go to line 47*
51					
52	**Roadway AND Intersection Projects:**				
53	ENTER anticipated volume per lane on facility as a result of the project, in vehicles				
54	per hour during period of congestion.				
55	ENTER number of lanes on facility as a result of the project affected by delay during period of				
56	congestion. (For intersections, enter all lanes for all movements affected by delay during				
57	period of congestion).				
58	ENTER Average Vehicle Occupancy (AVO) on facility during period of congestion				
59	ENTER anticipated hours of congestion on facility as a result of the project, measured as total				
60	period of time traffic flows at less than preferred speed.				
61					**<== Projected Person-Hours of Congestion Per Day**

	A	B	C	D	E
62	**WEEKEND CONGESTION**				
63	Does the project address delay occurring on:				
64	Saturdays Y OR N?			0	
65	Sundays Y OR N?			0	
66					
67					
68	**CALCULATED VALUE OF TRAVEL TIME SAVINGS**				
69					**< == Value of Travel Time Savings**
70					
71					
72					
73	**ANNUAL OPERATING COST SAVINGS**				
74	ENTER annual operating cost savings in dollars per year (use current dollars)				*Attach supporting documentation, including assumptions,*
75	(May include maintenance costs savings, capitalized lease savings, and labor/personnel cost savings)				*explanation of how savings will occur, and calculations.*
76					
77					
78					
79	**ANNUALIZED TOTAL PROJECT COST AND CAPITAL RECOVERY FACTOR CALCUALTION**				
80	ENTER total project cost				
81					
82	The Capital Recovery Factor is based on the following formula: i / (1 - (1/ (1+i) ^ n))				
83	where i= interest rate assumed to be 5%; n=useful life of the proposed project.				
84	ENTER Useful Life of facility in years as a result of the proposed project				*For useful lives of most project types, please refer to Table - I.*
85					
86					
87	**CALCULATED ANNUALIZED TOTAL PROJECT COST AND COST EFFECTIVENESS RATIO**				
88					**< == Annualized Total Project Cost**
89					
90					
91					**<== Cost-Effectiveness Ratio**
92					**Enter this value on the project application.**
93					

	A	B	C	D	E
94	**III. FORMULAS, ASSUMPTIONS, AND DEFINITIONS**				
95	Cost Effectiveness is measured by: (as defined in Multimodal Scoring Criteria)				
96	*(Annual time travel savings + annual operating cost savings) / Annualized total project costs*				
97					
98	**A. Annual Time Travel Savings, General Formula and Definitions of a Roadway Project and of an Intersection Project.**				
99	*Calculation is based on the following formula:*				
100	*T = t x Days x [PH(current) - PH(project)]*				
101	*Where:*				
102	*T = Total value of travel time savings per year in dollars*				
103	*t = Value of travel time in dollars per hour per person.*				
104	*PH(current) = Current person-hours of congestion per day on the existing facility*				
105	*PH(project) = Projected person-hours of congestion perday on the facility as a result of the project*				
106	*Days = # of days in a year affected by congestion.*				
107					
108	*Roadway facilities are considered arterials, collectors, highways, and freeways. For arterial, collector, and highway facilities which contain one or more controlled*				
109	*intersections, and for which the project is intended to address conditions beyond the delay caused by one or more of the intersections, performance is considered*				
110	*as the average travel speed over the length of facility inclusive of intersection delay.*				
111	*Intersection facilities are controlled either by a signal or stop sign, and an intersection project is one which addresses delay which is only caused by the intersection.*				
112					
113	**B. Annual Operating Cost Savings**				
114	*Calculation is based on savings in operating costs. These savings can include: Reduced maintenance costs;*				
115	*Capitalized lease cost savings; and Reduced labor /personnel costs.*				
116					
117	**C. Annualized Total Project Costs**				
118	*Calculation is based on the following formula:*				
119	*Annualized Total Project Costs = Total Project Cost x Capital Recovery Factor*				
120					
121	**D. Value of Time Assumptions**				
122	*$7.00 / hour - Work Trips (Average travel time for work trips is 25 minutes)*				
123	*$3.50 / hour - Non-work / Recreational Trips (Average travel time for recreational trips is 19 minutes)*				
124					

Transportation Enhancement Activities[2]

ISTEA requires states to set aside 10 percent of their STP funds for Transportation Enhancement Activities (TEAs)—projects that improve travel by creating more attractive settings near transportation facilities, by preserving scenic or historic transportation sites, or by expanding options for bicyclists and pedestrians.

Applicability of MTC's Process to Other Metropolitan Planning Organizations
Since TEA funds represent a completely new category of funding, most planning agencies are facing similar problems setting up TIP development processes for this source. For this reason, and because MTC's process is based on criteria developed for all regions in the state of California, it should be useful for regions of varying sizes and complexities.

Eligible Project Sponsors
Environmental agencies, special water and park districts, transit districts, cities, counties, and other public agencies are eligible sponsors of TEA projects.

Project-Eligibility Requirements
ISTEA defines 10 categories of projects that are eligible for TEA funds. These projects must be related to the intermodal transportation system by either function, proximity, or impact. In addition, enhancement activities must provide benefits that are beyond the scope of traditional transportation projects. Standard landscaping, mitigation, and other permit requirements do not qualify. Detailed descriptions of these categories and examples of eligible projects are provided in Appendix A.

- Bicycle and pedestrian facilities
- Acquisition of scenic or historic sites or easements
- Scenic or historic highway programs
- Landscaping and other scenic beautification
- Historic preservation
- Rehabilitation and operation of historic transportation buildings, structures, or facilities
- Preservation of abandoned railway corridors (including conversion for use as bikeways and walkways)
- Control and removal of outdoor advertising
- Archaeological planning and research
- Mitigation of water pollution due to highway runoff

[2]This chapter's information is based on "Developing the Enhancements Program in the San Francisco Bay Area," by Victoria Eisen, David Murray, and Alan Eliot. This paper is available from MTC.

MTC's TIP Development Process

Cooperative Planning

MTC actively participated in a statewide task force to develop TEA evaluation criteria. This task force was convened by Caltrans in response to criticisms of the state's original plan to program TEA funds for highway landscaping and soundwall projects. Members of the Enhancements Task Force included regional planning agencies, bicycle advocacy groups, local parks and recreation departments, historic preservation groups, the California Coastal Commission, the California Resources Agency, the Department of Fish and Game, the U.S. Forest Service, the Bureau of Land Management, and the Federal Highway Administration (FHWA). In addition to creating screening and scoring criteria for projects, the task force determined the regional allotment of TEA funds.

Once project eligibility criteria had been established, MTC conducted a thorough public outreach campaign to inform all interested parties in the region about the opportunities offered by TEA funds. The campaign included frequent reports to the Bay Area news media, two radio talk show appearances, and information packets sent to 600 potential project sponsors. In response, MTC received 152 applications requesting a total of $94 million — an amount that exceeded MTC's bid target constraint by $76 million. To cull the best projects from this large group, MTC assembled an evaluation team composed of individuals familiar with each of the eligible activities, including artists, bicycle planners, landscape architects, environmentalists, and historic preservationists. Members included MTC staff, staff from other regional agencies, and city and county staff. While the process proved to be more time consuming and difficult than expected, the creativity and quality of the proposals rewarded the evaluation team's efforts.

Statewide Screening and Scoring Criteria

The screening criteria developed by the statewide task force were primarily based on the eligibility requirements for enhancements activities as set out in ISTEA and further defined by the FHWA. Other screening criteria were added, such as requirements that the project be well-defined and supported by a valid financial plan. Details of the screening and scoring criteria are given in Appendix A.

For the scoring criteria, the task force divided the benefits or measures of project merit into four areas:

1. Regional and Community Goals – How well does the project meet local goals? Does it implement community objectives? Does the project have a broad range of local support?
2. Cost Effectiveness – How much benefit does the project offer per dollar requested?
3. One-time Opportunity – Will the opportunity to do the project be lost if funding is deferred from the current programming cycle?
4. Project-Specific Benefits – Projects were divided into four categories:

    A. Scenic/Aesthetic

B. Historic/Archeological
C. Bike/Pedestrian, and
D. Water Runoff Purification

The points a project could receive in the project-specific category were derived from a combination of the demonstrated need or opportunity at the project site and the degree to which the proposed project would address that need or opportunity.

MTC's Refinement of the State Evaluation Criteria

The evaluation team that MTC assembled was subdivided into three scoring teams, based on areas of expertise: scenic/aesthetic; historic/archeological; and bicycle/pedestrian. No water mitigation projects meeting basic eligibility criteria were submitted to MTC. Each team briefly reviewed all of the applications in their category and assigned a High, Medium, Low, or Ineligible rating to each. Due to the very tight schedule of the process and the large numbers of applications MTC received, the group focused on projects rated "High."

Soon after the three teams began scoring the projects, they reconvened to ensure that they were scoring projects consistently. The teams found the statewide criteria to be subjective in several places and difficult to apply to individual projects. Therefore, the group made two types of adjustments to the guidelines.

First, in each of the scoring categories, the statewide guidelines awarded points on a continuous scale ranging from zero to the maximum possible in that category. To simplify the scoring process and decrease scoring discrepancies among team members, the MTC scoring teams chose to establish three discrete scales for awarding points: 0-4-8, 0-5-10, or 0-10-15-20. For instance, if a project could receive a maximum of ten points in a particular category according to the statewide criteria, it was given either zero, five, or 10 points at MTC. This helped narrow the debate over project scores.

The other modification consisted of a more detailed interpretation of various criteria. For example, one such change involved the awarding of cost-effectiveness points. Instead of using the capital recovery approach in the statewide guidelines which proved inconsistent, a ratio of total project points per total dollar amount being requested was calculated. Each project's cost-effectiveness score was then normalized on a scale from zero to 10. Uniform standards were also developed for the other criteria.

Each of the three scoring teams met an average of 20 hours over three weeks. A two-page summary of the statewide scoring criteria was used to record the breakdown of project scores and any comments (Appendix B).

As the draft program of projects was being developed, MTC management assessed several options for ranking the scored projects. Public comments received at a hearing where a draft ranking was presented stressed that cost-effectiveness was not considered highly enough, and that several large projects would absorb too much of the regional bid pot. In addition, equity considerations required that at least one project be funded in each of the MTC counties that submitted applications. The comments and considerations resulted in four options being evaluated:

1. Rank by score;
2. Rank by score, with cost-effectiveness weighted twice as much as the statewide criteria called for;
3. Rank by score, capping the TEA share of each project at $1 million. In order to equitably do this, capped projects were re-scored based on the scaled-down project, and the project sponsors were contacted to ensure that they were willing to construct the smaller project or could provide the unfunded portion of the original project; and
4. Rank by score, capping the TEA share of each project at $1 million and guaranteeing each of the participating counties in the MTC region at least one project.

Since capping the TEA share of each project to $1 million significantly increased, from 23 to 39, the number of projects that the region hoped to fund, MTC chose to follow option four. This process led to a program of projects that included many good projects from each of the activity-specific TEA areas (scenic/aesthetic, historic/archaeological, and bicycle/pedestrian). Ultimately, the California Transportation Commission, which makes the final decisions on programming TEA funds for the state, opted to fund 29 of the 39 projects submitted. MTC is already at wok prioritizing the next cycle in which 203 TEA applications requesting $95 million have been received.

Lessons Learned

During the evaluation process, two funding problems became apparent. For bicycle projects, federal requirements stipulate a 20 percent local match, whereas in California sponsors of scenic/aesthetic and historic/archaeological projects need only provide a 11–1/2 percent local match. MTC anticipates that this situation will be addressed in an ISTEA clean-up bill. Another issue was the FHWA "50 percent Rule" requiring a minimum of 50 percent federal funding for each project. After some discussion, FHWA agreed that this rule was inappropriate for the TEA program and should be waived as many projects have substantial local backing.

Although the multi-disciplinary, multi-agency approach to project evaluation that MTC employed was highly rewarding, it had its challenges. Probably the most difficult task was recruiting scoring team members with both project evaluation experience and sufficient expertise in one or more "enhancement" areas. This challenge is particularly vivid for the scenic/aesthetic team because the nature of aesthetics is, in many ways, the most difficult to quantify.

When recruiting staff from other agencies, the MPO or lead agency needs to clearly state its expectations. MTC invited staff from other agencies to score projects but did not make it clear that MTC would ultimately recommend the final program. As a result, by the end of the process, some outside team members felt confused about what contributions had been expected from them.

Finally, caution should be exercised in enlisting project evaluation volunteers from other agencies, taking particular care to screen out project sponsors. Project sponsors should not be permitted to score projects in categories other than those in which their project belongs, since all projects ultimately compete with each other.

After the conclusion of the first TEA cycle, MTC held a workshop to help project sponsors improve their applications and to elicit suggestions for improving the process for the next cycle. The workshop was attended by more than 250 potential project sponsors. Recommended changes included scoring bike projects that expand facilities to satisfy currently unmet demand commensurate with gap closure projects and incorporating life-cycle considerations in the cost-effectiveness calculations.

Following are some MTC recommendations for areas developing an enhancements program:

1. Separate the program from other state transportation programs. The enhancements program has a unique purpose.
2. Publicize the program. Prepare a diverse list of interested parties.
3. Involve interested parties in the development of project evaluation criteria and review of project rankings.
4. Include in your scoring team individuals familiar with each of the eligible project categories, such as artists, bicyclists, and historic preservationists.
5. Carefully define the screening criteria, including the definition of the "transportation experience" that is to be enhanced by a given project.
6. Allow some time to iron out any wrinkles. The enhancements program is different from other project review processes.
7. Enjoy it. The originality and beauty of the projects are rewarding.

Appendix A

Screening Criteria

Does the project fit the program? Transportation enhancement activities are subject to all Title 23 United States Code, requirements, the Uniform Relocation Act, all federal, state, and local environmental laws, Caltrans' administrative guidelines, and require federal approval. Transportation enhancement activities must meet the screening criteria, described below.

Transportation enhancement activities must meet all of the following screening requirements, where applicable. If a proposal meets all of the applicable criteria within these requirements, it is eligible for ranking; if not, it will be dropped at this point. The screening requirements fall into seven groups:

I. Transportation Enhancement
II. Consistency
III. Financial
IV. Project-Specific
V. Air Quality
VI. Americans with Disabilities Act (ADA), and
VII. Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation

I. Transportation Enhancement Requirements

"Is the project eligible for Transportation Enhancements funding" This question can be answered yes only after 1a, 1b, and 1c are answered affirmatively. Transportation enhancement activities must meet three basic criteria, based on instruction from the Federal Highway Administration:

a. *"Relationship to Intermodal Transportation System"* Projects must have at least one direct relationship to the intermodal transportation system, which consists of all forms of transportation in a unified, interconnected manner. This relationship may be one of function, proximity, or impact. For example, a bikeway is a functional component of the intermodal transportation system. Removal of outdoor advertising in the viewshed of a highway is justified in light of its proximity. Water pollution control alongside an existing highway to protect or improve a drinking water supply would qualify based on the impact of the highway in terms of water pollution.

b. *"Over and above normal project"* Enhancement activities are over and above normal transportation projects. Typically, a normal transportation project includes mitigation, standard landscaping, other permit requirements and provisions negotiated as a condition of obtaining a permit for a transportation project for a normal [non-enhancement] transportation project. If this proposal is an enhancement to a larger project, check the environmental document for these items - Is the proposed enhancement part of the project description? Is it listed as mitigation? A "yes" answer disqualifies the project. Permitting agencies might include federal

agencies such as U.S. Forest Service, Bureau of Land Management, or U.S. Corps of Engineers. State permitting agencies might include State Department of Fish and Game. Regional agencies might include a regional water qualify board.

c. *"Which category or categories encompass the TEA?"* Projects must be selected from one or more of the 10 activities categories. Only those activities listed in Section 1007 (c) are eligible to be accounted for as transportation enhancement activities. If in doubt as to category, make a case. RTPA, CTC, and FHWA will make an eligibility call. The ten categories and typical activities are:

1. Provision of facilities for pedestrians and bicycles.

This category provides an opportunity to create linkages in the existing transportation system by funding bicycle and pedestrian modes of travel. The bicycle and pedestrian modes connect people to activity centers, such as businesses, schools, and shopping and recreation areas, and to other modes.

Projects accommodate bicyclists or pedestrians beyond or in addition to what is necessary for safe accommodation. This includes activities that enhance the transportation system through more aesthetic routing or design or improving existing facilities to make them more usable for pedestrians and bicyclists. The purpose of the project must be for transportation but if a recreation experience is gained as a result of the transportation facility, this does not exclude the activity from consideration under this program..

Activities are not eligible where they are conducted as an incidental and routine part of new transportation projects in order to accommodate routine use by pedestrians and bicycles. Paved shoulder, wide curb lanes, sidewalks, and curb cuts are not eligible if incidental and routine to road construction or reconstruction, however bicycle lanes are eligible.

Projects to retrofit existing facilities solely for conformance to accessibility standards in the California Building Code do not qualify.

EXAMPLE OF PROJECTS: Bicycle lockers at rail stations, bus depots, airports, recreation facilities. Bikeways: Class I (bike paths); Class II (bike lanes); Class III (bike routes). Bikeways or pedestrian paths which separate these modes of travel from the motorized transportation system. Acquisition, development and construction of separate pedestrian and bicycle facilities on or off road rights-of-way or in relation to transit facilities are an example of eligible activity, as are improvements to facilities which go beyond basic access and mobility.

2. Acquisition of scenic easements and scenic or historic sites.

This category may be applied to purchase, donation, transfer or trade of lands which possess significant aesthetic, historic, natural, visual or open space values.

Funds may be used for transaction costs including appraisals, surveys, legal costs or purchase costs. Acquisition of scenic or historic sites includes expenditure of funds for the purchase or the use of funds to accept the donation, transfer or trade of (a) less than fee interests in land which possess significant scenic or cultural values and

(b) fee title acquisition of such lands and any property listed in the California Register or eligible for listing in the National Register of Historic Places.

Mechanisms must be in place to enforce significant scenic or historic values, and the project sponsor must agree to enforce mechanisms to preserve them. The owner of any property acquired must be willing to participate in a preservation covenant attached to the deed of the property. Such a covenant ensures that future work on the property will respect the scenic or historic integrity of the property.

EXAMPLE OF PROJECTS: Acquisition of a scenic easement, scenic site or historic site that enhances the transportation experience as part of the transportation system, or as a significant part of the transportation viewshed, such as Big Sur viewsheds. Acquisition of a historic bridge, historic transportation terminal, land around a historic site adjacent to a scenic highway. Acquisition of historic properties which do not qualify for protection under the National Register or California Register, but are important to local residents because of tradition or historic community identity.

3. Scenic or historic highway programs.

This category covers protection and enhancement of state scenic highways or federally designated scenic byways and backcountry byways or state or federally designated historic highways. Funds may be used only for activities that will protect and enhance the scenic and historic integrity and visitor appreciation of an existing highway and adjacent area, or for planning, designation and development of new state scenic byway programs. (Some additional funds are provided under another section 1047 of ISTEA for scenic highway and byways. These scenic byway activities will be coordinated with the transportation enhancement activities. Call the Scenic Highways Coordinator at (916) 323-8819 for further information.)

EXAMPLE OF PROJECTS: Historic Pasadena Freeway, interpretive plaques or restoration of historic lighting standards. Historic Old Highway 50, historic Feather River Highway, Historic Euclid Avenue and historic Sierra Railroad. Historic aesthetic treatment on retaining walls and guardrails. Visually sensitive bridge rails, for use on Scenic Highways and in areas of high visual sensitivity, which meet Caltrans and FHWA safety requirements.

4. Landscaping and other scenic beautification.

This category includes landscape planning, design and construction activities which enhance the aesthetic or ecological resources along transportation corridors, points of access, and lands qualifying for other categories of transportation enhancement activities.

Architectural treatment, applied or integrated, of transportation structures, including bridges and highways beyond Caltrans' utilitarian design may be considered an enhancement activity, as long as it is beyond mitigation required in an environmental document. The primary purpose must be to enhance the scenic view.

Projects which enhance the aesthetic resources or beauty of the transportation

system may include planning, design and construction of scenic vistas and overlooks, and restoration of historic landscapes. Projects which enhance the ecological balance along a transportation corridor include planning, testing and planting for restoration or reintroduction of native plant communities and appropriate adaptive species, and the provision of interpretive information about the federal and state agency programs through which ecological resources are preserved.

Projects on the National Highway System must be consistent with Caltrans' overall landscape enhancement program and policies, and will be approved by the District Landscape Architect.

Projects may not be for routine, incidental or maintenance activities such as grass cutting, tree pruning or removal, erosion control, screen planting, construction of noise barriers, drainage improvement and post-construction finish work such as replanting and reseeding.

EXAMPLE OF PROJECTS: 'Gateway' plantings to communities. Landscaping transplants to move trees outside of clear zones and into more attractive, safer locations. Retrofitting existing noise barriers with landscaping. Replacement of a utilitarian bridge with one of appropriate architectural qualities in a setting which calls for more than a utilitarian design. Roadside Ecological Viewing Areas. Development of visually sensitive bridge rails, which meet Caltrans and FHWA safety requirements. Art on soundwalls.

5. Historic preservation.

Cultural properties listed in the California Register of Historical Resources and locally-designated historic resources, if the local designation is based on locally-adopted, written criteria are eligible for Transportation Enhancement Activity funding. Section 5024.1 of the California Public Resources Code defines the California Register as an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources. The California Register includes properties determined eligible for or listed on the National Register of Historic Places, California State Historical Landmarks, and State Points of Historical Interest programs. In addition, the California Register includes locally designated historic and prehistoric resources as well as local survey inventories using the National Register standards.

All work must be done in compliance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, or Secretary of the Interior's Standards for Historic Preservation Projects, and must be managed under the direction of professionals meeting the standards published in the Code of Federal Regulations, 36 CFR, Part 61. The qualifications define minimum education and experience required to perform eligible historic preservation activities. In some cases, additional areas or levels of expertise may be needed depending on the complexity of the task and the nature of the historic properties involved.

In some circumstances, the cultural and sacred values of a Native American or other ethnic community site may require the inclusion of additional viewpoints. Proposals referring to such sites must be accompanied by evidence that appropriate Native American and ethnic community representatives have been consulted.

This category includes acquisition, protection, rehabilitation, interpretation, restoration, and stabilization or any combination of the foregoing, of any prehistoric or historic district, site, building, structure, landscape or object (and artifacts and records related to it) included in the California Register, or eligible for inclusion in, the National Register of Historic Places.

Projects should enhance the transportation system by improving the ability of the public to appreciate the historic significance of the project itself or the area to be served by the project. Activities may include, but are not limited to, rehabilitation of historic places, activities that encourage or facilitate historic interpretation for the public of sites associated with roads and other transportation facilities, heritage tourism, and that preserve or improve the appearance or quality of a historic property, district, or landscape, and assist in providing research and educational opportunities or related services on individual or related historical resources.

EXAMPLE OF PROJECTS: Interpretation of placer mining at Alpha Omega Rest Area on Highway 20 and at Gold Run Rest Area on Highway 80. Restore historic landscape on a highway.

6. Rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals).

Historic transportation buildings are buildings or related structures associated with the operation, passenger and freight use, construction or maintenance of any mode of transportation where such building is listed in the California Register or eligible for listing in the National Register of Historic Places.

Structures and facilities include tunnels, bridges, trestles, embankments, rails or other guideway, non-operational vehicles, canal viaducts, tow paths and locks, stations and other built transportation features integrally related to the operation, passenger and freight use, construction or maintenance of any mode of transportation.

Rehabilitation means the process of returning the property to a state which makes possible a contemporary use while preserving the significant historic features of that property.

Operation means the provision of access and service in a manner related to both the continuation of a contemporary transportation or non-transportation use consistent with the historic character of the property and open to the general public on a not-for-profit basis.

EXAMPLE OF PROJECTS: Transbay Terminal, Santa Fe Depot in San Diego, Union Station in Los Angeles. Central Valley railroad depots, train stations on the Peninsula commute. Pasadena freeway. Visitor center as part of historic bridge dam bridge replacement project. Costs on historic bridges over and above normal mitigation. (Includes ADA.)

7. Preservation of abandoned railway corridors (must include the conversion and use for pedestrian or bicycle trails).

This category includes the acquisition, rehabilitation and development of corridors for public use including bicycle or pedestrian use. In some cases it could allow preservation without capital improvements, although emphasis is placed on current enhancement value. This category permits the development and rehabilitation of privately-owned rail corridors open to the general public without charge. This is not solely for rail preservation. A declaration of intent for future bike or pedestrian use is required.

EXAMPLE OF PROJECTS: Existing Sacramento Northern Railway Bicycle Trail. Biz Johnson Trail on old Southern Pacific right of way in Susanville.

8. Control and removal of outdoor advertising.

Includes the control and removal of existing nonconforming outdoor advertising signs, displays and devices in addition to removal of illegal signs required to exercise effective control of outdoor advertising under Section 131 of Title 23. Priority shall be given to the removal of outdoor advertising signs, displays and devices in conjunction with other enhancement activities, and with nonconforming displays along scenic highways. This category may include compilation of an accurate inventory of nonconforming outdoor advertising displays.

EXAMPLE OF PROJECTS: Removal of nonconforming billboards on scenic highways.

9. Archaeological planning and research.

This includes, but is not limited to, research on sites qualified for transportation enhancement funds; experimental activities in archaeological site preservation and interpretation; planning to improve identification, evaluation and treatment of archaeological sites; problem-oriented synthesis using data derived from (though not limited to) transportation-related archaeological activities, local and regional research designs to guide future surveys, data recovery and synthetic research, and activities having similar purposes carried out in partnership with other federal, state, local and tribal government agencies and non-governmental organizations.

All work must be done in compliance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation or Secretary of the Interior's Standards for Historic Preservation Projects and must be managed under the direction of professionals meeting the standards published in the Code of Federal Regulations, 36 CFR, Part 61. The qualifications define minimum education and experience required to perform eligible historic preservation activities. In some cases, additional areas or levels of expertise may be needed depending on the complexity of the task and the nature of the historic properties involved.

In some circumstances, the cultural and sacred values of a Native American or other ethnic community site may require the inclusion of additional viewpoints. Proposals referring to such sites must be accompanied by evidence that appropriate Native American and ethnic community representatives have been consulted.

This category is not for excavations.

EXAMPLE OF PROJECTS: Regional or statewide research. Statewide or regional archaeological study for State Routes in archaeologically sensitive areas, developing an Archaeological Inventory similar to the existing Bridge Inventory. Upgrade or expansion of regional curation facilities to meet federal and state guidelines, in order to regionalize archaeological collections and facilitate regional archaeological research.

10. Mitigation of water pollution due to highway runoff.

Projects are for facilities and programs reducing or eliminating pollution from storm water run-off from highway facilities in addition to current requirements and procedures for such mitigation. Projects that demonstrate aesthetic and ecological methods for mitigation and that enhance recharge are encouraged.

Projects may have groundwater recharge, multiple resource benefits, and aesthetic preservation components, but only when secondary to the purpose of mitigating water pollution due to highway runoff.

EXAMPLE OF PROJECTS: Water pollution control alongside an existing highway to protect or improve a drinking water supply.

II. Consistency Requirements

a. The proposed activities must be consistent ("not inconsistent") with the regional transportation plan. Projects must be consistent with the policy direction of this Plan if the Plan does not go into a level of detail that specifically lists the activities.

b. Proposed activities are either included in, or consistent with, an applicable adopted state, regional, or local plan. Activities must be consistent with the policy direction of the relevant local plan, if the plan does not go into a level of detail that specifically lists them.

c. All proposed activities must be consistent with local land use plans. Proof of consistency, where the local land use plans do not provide a sufficient level of detail, is acceptable.

III. Financial Requirements

a. The sponsor must have the ability to meet financial processing requirements within a realistic time frame for project completion, level of funding, and experience of project personnel.

b. The proposed project must have reasonable cost estimates and be supported by an adequate financial plan. Adequate financial plans include the identification of all sources of funding to build the project, a logical cash flow given that these are reimbursable funds, and sensible project phasing. All facilities that require an ongoing operating budget to be useful must demonstrate that such financial capability exists as part of this requirement.

c. As required by the Federal Highway Administration and Caltrans, all local contributions to the activity must be affirmed by a formal action of a policy board with the authority to commit funds. Such a formal action must have occurred prior to the inclusion of a project in the adopted State Transportation Improvement Program.

d. The sponsor must have dollar match from non-federal public funds.

e. Sponsor must have checked with State Historical Building Safety Board.

f. Project sponsors must demonstrate the ability and commitment to maintain the transportation enhancement activity. (Title 23, U.S. Code)

IV. Project-Specific Requirements

a. The proposed activities must have a completed application form, including all attachments, and should be submitted in accordance with established deadlines.

b. The proposed activities must be well-defined. They must have clear project limits, intended scope of work and project concept. Nominating agency must show that project costs have considered contracting out administration of project to another agency when nominating agency does not have a master agreement with Caltrans. Agency must also show that costs for federal environmental documentation have been considered (risk/assessment).

c. The proposed activities must be well-justified. Wherever possible, this justification should include the results of quantitative analysis. Adequate information must be submitted so that what the activities will accomplish can be evaluated.

d. Where applicable, the proposed project must have appropriate phasing and must result in usable segments, functional facilities, or vital right-of-way.

e. For the accelerated cycle, funds must be obligated within one (1) year from signing the first FNM 76 on the project. The first FNM 76 must be signed by February 1, 1994 or within 60 days after an approved RTIP.

For the 1994 STIP cycle, the project must be advanced to a state of readiness for implementation by the end of the fiscal year (June 30) in which the project is to be programmed. This includes the ability to obligate funds by the end of the applicable federal fiscal year (September 30).

f. The proposed activities have, or will have, environmental clearance by the time funding (allocation) is voted for construction or action by the California Transportation Commission, and all clearances have been obtained in order for timely implementation in the year programmed. The nomination must demonstrate a reasonable schedule for National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) clearances.

g. The sponsor of the proposed activity is an eligible nominating agency.

V. Air Quality Requirements

Usually, transportation enhancement activities will not create air quality problems.

a. Proposed activities located in air quality non-attainment areas, which would result in air quality impacts, must be consistent with the regional project review requirements. There can be no significant unmitigated negative impacts to the region's air quality and adequate transportation control measures must be included.

b. In Transportation Management Areas (generally, urbanized areas) Federal funds may not be programmed for any highway project that will result in a significant increase in carrying capacity for single occupant vehicles unless the project is part of an approved congestion management system. (In the Metropolitan Transportation Commission (MTC) region, all projects, if programmed, will be required to comply with MTC Resolution No. 2270.)

VI. Americans with Disabilities Act (ADA) Requirements

All proposed projects must meet applicable ADA requirements.

VII. Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation

Proposed historic preservation projects must meet applicable Secretary of the Interior Standards and Federal Advisory Council on Historic Preservation Standards, and California Uniform Building Code.

Scoring Criteria

Each project nomination can receive a maximum of 105 points: up to 65 points in general scoring and up to 40 points in activity-specific scoring. In the general scoring process, all applications are scored by the same point system. For the specific-activity scoring, the 10 transportation enhancement activity categories are grouped into four divisions of commonality, then a proposal is scored within the applicable divisions. The 10 categories are grouped only for this purpose.

These are the scoring values for the general merit criteria, and the possible points in each area:

1. Regional and Community Enhancement	50 points
2. Cost Effectiveness/Reasonable Cost	10 points
These are the bonus points available for any project:	
3. One-time Opportunity	5 points
Total Possible General Score	**65 points**

These are the activity-specific divisions and the possible points in each area. A project can score in only one of the specific divisions.

1. Bicycle, Pedestrian, Abandoned Rail Right-of-Way	40 points
2. Historic/Archaeological	40 points
3. Transportation Aesthetics and Scenic Values	40 points
4. Water Pollution Due to Highway Runoff	40 points
Total Possible Specific Score (1 Division only)	**40 points**

General Score
Each application will be evaluated on the following general criteria:

1. Regional and Community Enhancement (50 points)

The project score in this area is derived from the project's primary effects -- its intent and purpose -- on the following elements.

a. Benefit to quality-of-life, community, environment. 0-10 points

b. Increases access to activity centers, such as businesses, school, recreational areas and shopping areas. Connects transportation modes, has multimodal aspects. Reinforces, complements the regional transportation system, fills deficiency in the system. 0-8 points

c. Implements goals in the regional transportation plan, or other adopted federal, state, or local plans. Examples might include water quality plans or elements of general plans. 0-8 points

d. Increases availability, awareness or protection of historic, community, visual or natural resources. 0-8 points

e. Degree of regional or community support. For example, letters of support from local interest groups and public bodies, additional match. 0-8 points

f. Encompasses more than one of the four activity-specific divisions. 0-8 points

2. Cost-effectiveness/Reasonable Cost (10 points)

The project score in this area is a function of improved performance or productivity of the project as it relates to the annualized total project cost. Where the project does not lend itself to this type of analysis, the reasonableness of the cost should be established. For example, a bicycle route that takes a shorter path may be considered more cost effective than one that connects the same activity centers in a round-about way.

Highly cost-effective	10 points
Reasonable cost or moderately cost-effective	6 points
Low cost-effectiveness	2 points
Not cost-effective/Not applicable	0 points

3. Bonus Score

The following bonus points may be given for any project.

A one-time opportunity exists to take advantage of this project. Proposed project is threatened. For example, there is an immediate need to do this project, or the opportunity will be lost, or postponing the project could result in substantial degradation.

High	5 points

4. Activity-Specific Enhancement Divisions.

The Activity-Specific Enhancement Divisions are groupings of the 10 activity categories into 4 divisions with similar characteristics. This is done for the convenience of those who score the proposals. The 4 groups are not intended to affect the distribution of funds, nor to be anything other than a convenience to the RTPAs in the scoring process. Scores are for ranking at the regional level only. The

scores are not used by the Commission to compare projects between RTPAs on a statewide level.

A proposal can score in only one of divisions 1 through 4.

The project score in each activity-specific division is designed to compensate for inability to score in other specific groups. It is not a way to double count benefits.

1. Bicycle, Pedestrian, Abandoned Rail Right of Way Specific Division (40 points)

Category 1 - Provision of facilities for pedestrians and bicycles

Category 7 - Preservation of abandoned railway corridors (including the conversion of use thereof for pedestrian or bicycle trails)

Need for proposed facilities: shortage of bicycle or pedestrian facilities; missing link in connecting the intermodal system, importance of link; Necessity of proposed facilities to serve the system:

High 10 - 20 points
Medium 5 - 10 points
Low 0 - 5 points

Degree proposed project meets needs or addresses opportunities for bicycle or pedestrian facilities:

High 10 - 20 points
Medium 5 - 10 points
Low 0 - 5 points

2. Historic/Archaeological Specific Division (40 points)

Category 2 - Acquisition of historic sites

Category 3 - Historic highway programs

Category 5 - Historic preservation

Category 6 - Rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals)

Category 9 - Archaeological planning and research

Current recognized level of historic significance (federal, state, or local):

High 10 - 20 points
Medium 5 - 10 points
Low 0 - 5 points

Degree project activity will enhance, preserve, or protect the historic/archaeological resource:

High 10 - 20 points
Medium 5 - 10 points
Low 0 - 5 points

3. Transportation Aesthetics and Scenic Values Specific Division (40 points)

Category 2 - Acquisition of scenic easements and scenic sites

Category 3 - Scenic highway programs

Category 4 - Landscaping and other scenic beautification

Category 8 - Control and removal of outdoor advertising

Degree to which scenic or aesthetic resources are rare, unique, or significant; degree to which potential exists for landscaping or scenic beautification; degree of visual blight:

High 10 - 20 points
Medium 5 - 10 points
Low 0 - 5 points

Degree to which project would preserve, rehabilitate or develop scenic or aesthetic resource:

High 10 - 20 points
Medium 5 - 10 points
Low 0 - 5 points

4. Water Pollution Due to Highway Runoff Division (40 points)

Category 10 - Mitigation of water pollution due to highway runoff

Magnitude of environmental problem:

High 10 - 20 points
Medium 5 - 10 points
Low 0 - 5 points

Degree to which activity solves this problem:

High 10 - 20 points
Medium 5 - 10 points
Low 0 - 5 points

APPENDIX B

SCORING SHEET — TRANSPORTATION ENHANCEMENT ACTIVITIES — FIRST CYCLE

Project Name: _____ TOTAL RAW SCORE _____

Listing Number: _____ TOTAL FINAL SCORE _____

Project Type: _____

1. Regional and Community Enhancement

a. Benefits to quality of life, community, environment. Examples might include provision of safe, aesthetic pedestrian facility at a rail station, removal of billboards, on a rural scenic highway, provision for wildlife corridors or mitigation areas. 0, 5, 10 _____
COMMENTS:

b. Increases access to activity centers, such as businesses, school, recreational areas and shopping areas. Connects transportation modes, has multimodal aspects. Reinforces, complements the regional transportation system, fills deficiency in the system. 0, 4, 8 _____
COMMENTS:

c. Implements goals in the regional transportation plan, or other adopted federal, state, or local plans. Examples might include water quality plans or elements of general plans. 0, 4, 8 _____
COMMENTS:

d. Increases availability, awareness, or protection of historic, community, visual, or natural resource. 0, 4, 8 _____
COMMENTS:

e. Degree of regional or community support. For example, letter of support from local interest groups and public bodies, additional match. 0, 4, 8 _____
COMMENTS:

f. Encompasses more than one of the activity-specific divisions. (Bike/Ped, Scenic/Aesthetic, Arch/Hist, Runoff: 1 = 0; 2-3 = 4; 4 = 8) 0, 4, 8 _____
COMMENTS:

2. **Cost Effectiveness/Reasonable Cost:** {(Total Score *wo/ Cost Effectiveness*) * 100,000)/TEA Cost}. The natural log of this result is taken. The log results of all of the projects are normalized to 10 points. 0—10 _____

3. **Project Need/One-Time Opportunity:** A one-time opportunity exists to take advantage of this project. The proposed project is threatened. For example, there is an immediate need to do this project, or the opportunity will be lost, or postponing the project could result in substantial degradation of the resource. For example, a historic structure would deteriorate past the point of restoration in two years, or continuing water pollution due to highway runoff would cause irreversible damage to the environment. 0, 5 _____
COMMENTS:

(over for activity-specific score)

Bicycle, Pedestrian, Abandoned Rail Right-of-Way (including conversion to ped/bike trail)

Need for proposed facilities: shortage of bicycle or pedestrian facilities; missing link in connecting the intermodal system, importance of link; necessity of proposed facilities to serve the system.

COMMENTS:

SCORE: _____

High	20
High-Medium	15
Medium	10
Low	5

Degree to which project meets needs or addresses opportunities for bicycle or pedestrian facilities.

COMMENTS:

SCORE: _____

High	20
High-Medium	15
Medium	10
Low	5

Historic/Archeological Specific Divisions

Current recognized level of historic significance. *(Screening Notes: Cultural properties must be listed in the California Register of Historical Resources, or a locally-designated historic resource, based on locally-adopted, written criteria. Rehabilitation and operation of historic transportation buildings, structures or facilities, and historic sites for acquisition must be listed in the California Register of Historic Resources or the National Register of Historic Places or be eligible for the National Register. Historic highways must be a state or federally designated historic highway).*

COMMENTS:

SCORE: _____

High	20
High-Medium	15
Medium	10
Low	5

Degree to which project activity will enhance, preserve, or protect the historic/archeological resource.

COMMENTS:

SCORE: _____

High	20
High-Medium	15
Medium	10
Low	5

Transportation Aesthetics and Scenic Values

Degree to which scenic or aesthetic resources are rare, unique, or significant; degree to which potential for enhancement exists for landscaping or scenic beautification; current degree of blight.

COMMENTS:

SCORE: _____

High	20
High-Medium	15
Medium	10
Low	5

Degree to which project would preserve, rehabilitate or develop scenic or aesthetic resource.

COMMENTS:

SCORE: _____

High	20
High-Medium	15
Medium	10
Low	5

Water Pollution Due to Highway Runoff

Magnitude of environmental problem.

COMMENTS:

SCORE: _____

High	20
High-Medium	15
Medium	10
Low	5

Degree to which activity solves problem.

COMMENTS:

SCORE: _____

High	20
High-Medium	15
Medium	10
Low	5

Congestion Mitigation and Air Quality Improvement

CMAQ funds can be used for a broad range of transportation projects that improve air quality and assist non-attainment areas in achieving National Ambient Air Quality Standards. For example, projects in approved State Implementation Plans (SIPs) are generally eligible, assuming their air quality benefits are adequately documented. Transportation Control Measures (TCMs) also qualify for CMAQ funding, except for the two TCMs specifically excluded by ISTEA: reducing emissions from extreme cold-start conditions and programs to encourage removal of pre-1980 vehicles. Bicycle and pedestrian-related programs are eligible, as are capital costs for new transit projects and inspection and maintenance programs. Many other types of transportation activities are eligible, including planning and monitoring projects, as long as tangible air quality benefits can be reasonably expected from the program or project. Most CMAQ activities require a 10 to 20 percent non-federal match. Signalization and rideshare programs may be eligible for 100 percent CMAQ funding. States without nonattainment areas for ozone or carbon monoxide may use the smaller allotment of CMAQ funds that they receive for any STP-eligible project.

Eligible Project Sponsors
Eligible sponsors include transit operators, cities, counties, air quality management districts, and public bicycle, pedestrian, and ridesharing agencies.

Project-Eligibility Requirements
Many of the types of projects eligible for STP funds also qualify for CMAQ funds, provided that the project can be reasonably expected to improve air quality and contribute to attainment of National Ambient Air Quality Standards. See FHWA's "Further Guidance on the CMAQ Program" issued on October 16, 1992 for details.

- Implementation of most TCMs
- Bicycle facilities and programs
- Pedestrian facilities
- Development and implementation of traffic congestion, public transportation, and intermodal transportation management systems
- Two years of operating expenses for traffic monitoring and control systems
- Inspection and maintenance programs
- Transit projects
- Operating costs for new transit services for at most two years
- Highway and transit maintenance and reconstruction projects that are not routine, but instead provide air quality benefits
- Planning and air quality monitoring projects
- Public/private initiatives

MTC's Process

As described in the STP chapter, MTC applies the same screening and scoring criteria to projects competing for both STP and CMAQ funds. However, in programming CMAQ funds, MTC emphasizes air quality improvement, based on the demonstrated effectiveness of TCMs. Projects are categorized according to the following hierarchy with group 1 projects receiving first priority:

Group 1: Expeditious implementation of currently adopted federal TCMs deemed stalled according to a federal court order MTC is operating under, or adopted SIP projects that have not yet been fully implemented. These TCMs include signal timing, market-based measures and ozone excess voluntary "no-drive" days.

Group 2: Other currently adopted federal and state TCMs by effectiveness category given in the scoring criteria. Such TCMs include incident management, employer-based trip reduction rules, installation of a traffic operations system, and implementation of revenue measures.

Group 3: Other CMAQ projects. TCMs such as regional transit coordination, the expansion of transit services, the expansion of the regional rail system, park-and-ride lots, and an indirect source control program fall into this category.

Lessons Learned

See the Surface Transportation Program chapter, as MTC jointly programs STP and CMAQ funds.

Federal Transit Act's Section 9

The Federal Transit Act's Section 9 funds are available for the planning, construction, acquiring, improving, and operating of public transportation facilities and equipment, including the renovation of historic transportation facilities. Section 9 funds can not make up more than 80 percent of any capital project's expenses, nor can they be used for operating costs which constitute more than 50 percent of a project's total costs. Recipients of Section 9 funds are required to spend one percent of their grants on security projects, unless such a disbursement can be shown to be unnecessary. All projects that receive Section 9 funds must be included in the annual *Program of Projects.* In a transportation management area, Section 9 funds that are not needed for transit operating expenses or for compliance with ADA requirements may be used for highway projects.

Applicability of MTC's Process to Other Metropolitan Planning Organizations
The usefulness of MTC's selection process will probably depend a great deal on the degree of complexity of transit services in a given MPO's region. With 11 primary transit operators and more than a dozen smaller ones, MTC must weigh more diverse competing needs than most other MPOs. Designed to equitably balance those needs, MTC's process may be overly complicated for a region with one transit operator that receives limited Section 9 funds. However, the coordinated planning that led to the selection process and the incorporation into our criteria of ISTEA's transit-related factors may be valuable models even to regions with small numbers of operators.

Eligible Project Sponsors
Transit operators, metropolitan planning organizations, and other related public agencies that meet the Federal Transit Administration's requirements for becoming a federal claimant can be eligible sponsors of projects competing for Section 9 funds.

Project-Eligibility Requirements
Any project that contributes to the expansion, maintenance, or improved safety of public transit facilities may be eligible for Section 9 funds. See Circular 9030.1A for the Federal Transit Administration's definition of such projects. Examples of these projects are listed below.

- Replacement, rehabilitation, or purchase of revenue or service vehicles
- Track rehabilitation
- Construction or rehabilitation of ferry docks and bus bays
- Clean Air-related projects
- ADA-related projects
- Construction or rehabilitation of shelters and other infrastructure
- Purchases of tools and equipment

MTC's Process

Cooperative Planning

In partnership with the 11 primary transit operators in the region, MTC recently revised the existing Section 9 transit capital priorities process in response to ISTEA, and particularly to the 15 metropolitan planning factors whose consideration is mandated by the legislation. Representatives from each of these operators have been meeting as the Regional Transit Coordinating Committee (RTCC) since 1992, and in an earlier form for over a decade, to discuss regional transportation policy strategies, improve interoperator transfers, and deal with regional fund programming issues. MTC worked with the Finance Committee of the RTCC over an eight-month period to devise a new process that fairly addressed the differing needs of urban and suburban operators, while also meeting ISTEA mandates.

MTC's Three-Step Process

The MTC and RTCC meetings resulted in a three-part process for the programming of Section 9 funds: screening and then scoring projects, followed by a further sifting process that involves the application of programming principles to the list of projects. The structure is deliberately modeled on the multimodal selection criteria used to evaluate projects competing for STP and CMAQ funds. By implementing coordinated processes, as well as coordinated programming schedules, MTC can optimally program projects for the different fund sources, and thus take full advantage of ISTEA's flexible funding. The process is outlined below. The detailed criteria and programming principles are provided in the appendix.

1. *Screening criteria for candidate projects:* The first step in the capital priorities process is to ensure that the projects meet ADA and air quality requirements, follow key MTC policies, are supported by adequate financial plans, and have a reasonable expectation of being implemented. In addition, proposed projects must be consistent with land use and development plans and with facilities in adjacent counties, where applicable, as mandated by ISTEA. Projects that do not meet any one of these criteria will be excluded from consideration.

2. *Scoring criteria to evaluate projects based on relative merit:* The mandates of ISTEA, ADA, and clean air legislation are incorporated into four categories of factors to which points are assigned based on regional priorities. These categories are identical to those established for scoring STP and CMAQ projects: Maintain/Sustain the MTS, Improve the Efficiency and Effectiveness of the MTS, System Expansion, and External Impacts. However, the factors within these groups differ. The first addresses ISTEA's factors concerning preservation of existing facilities and meeting needs identified through forthcoming management systems. The second incorporates the ISTEA mandates to enhance and increase the use of transit services. The third includes the ISTEA factors aimed at expanding transit services, relieving congestion, and preserving future transportation corridors. Finally, the fourth category contains the ISTEA factors requiring consistency with energy conservation goals and land-use plans. Performance-based measures, such as increases in passenger security and passenger comfort and convenience, are an integral part of this evaluation.

3. *Programming principles to ensure that the program of projects will leverage the most state and federal resources and be equitable:* These rules are based on criteria such as project merit and project readiness. Since the above screening and scoring

criteria are used to evaluate other FTA and state funded transit projects, these principles also delineate which types of projects will be programmed with Section 9 funds and which are more appropriate candidates for Section 3 and state and local funds.

Development of Scoring Weights

In developing the scoring criteria, MTC staff and the RTCC Finance Committee started with the existing criteria which had been used to rank projects before the passage of ISTEA. Numerous additional scoring factors were added in response to ISTEA's mandates, including energy conservation, transit security, consideration of TCMs, and consistency with land-use policies. Consideration of data generated by the Public Transportation Facilities and Equipment Management System, when that is operational, was also incorporated into the scoring criteria. Since different-sized operators face varying needs, prioritizing these scoring factors in a way that was equitable to all operators proved to be more complicated than staff had anticipated. However, the final scoring criteria represents the result of RTCC's consensus process.

Appendix

Criteria

The Capital Priorities Criteria are divided into the following three parts.

1. Screening criteria for candidate projects.
2. Scoring criteria to evaluate projects based on relative merit.
3. Programming principles to ensure that the program of projects will increase mobility, clean the air, leverage the most state and federal resources, and be equitable.

Screening Criteria

A project must be in conformance with the following threshold requirements before the project can be scored and ranked in the Capital Priorities project list. Screening criteria fall into five basic groups. The following subheadings are used to group the screening criteria.

I. Consistency Requirements;
II. Financial Requirements;
III Project Specific Requirements;
IV. Air Quality Requirements; and
V. Americans with Disabilities Act (ADA) Requirements.

I. Consistency Requirements

A. Projects proposed for funding from Proposition 111 or 108 proceeds must be listed on the Congestion Management Program Capital Improvement Plan priority list.

B. The proposed project must be consistent with the Regional Transportation Plan (RTP). The RTP includes an adopted HOV Master Plan, Seaport Plan, and Airport Plan, and all project proposals must specifically be consistent with these elements of the RTP, if applicable. Small projects must be consistent with the policy direction of the RTP, as the RTP will not go into a sufficient level of detail to specifically list them.

C. Projects near or crossing county boundaries must be consistent/complementary with the facility (or proposed facility) in the adjacent county.

D. Projects must either be included in an adopted local or regional plan (such as Congestion Management Programs, Short Range Transit Plans, Countywide transportation plans pursuant to AB3705, the Seaport and Airport Plans, the State Implementation Plan, the Clean Air Plan, the Regional Transportation Plan, and local General Plans) or, for the 94/95 TIP, be an ISTEA emphasis area. ISTEA emphasis areas include maintenance and improved efficiency of the transportation system, new technology, the implementation of federal transportation control measures, and low cost operational improvements.

E. All proposed projects must be consistent with local land use plans. Proof of lack of inconsistency, where the local land use plans do not provide a sufficient level of detail, is acceptable.

F. All new rail starts projects must be consistent with MTC Resolution No. 1876, the regional rail agreement. Construction will only be considered for those projects in Tier 1. Projects from lower tiers will be considered for right-of-way preservation or planning only. In future cycles, this requirement will be met through consistency with the financially constrained Regional Transportation Plan.

G. ISTEA establishes fifteen factors that must be considered in the development of the TIP. All projects must address at least one of these factors, as listed in Table 1.

II. Financial Requirements

A. The funds requested do not exceed the ceilings established for different types of projects.

B. The proposed project has been approved by the operator policy board.

C. The proposed project has reasonable cost estimates, is supported by an adequate financial plan with all sources of funding identified and a logical cash flow, and has sensible phasing. Transit operators must demonstrate financial capacity, to be documented in the adopted TIP, as required by the FTA. All facilities that require an ongoing operating budget to be useful must demonstrate that such financial capability exists.

III. Project Specific Requirements

A. All projects must be well defined. There must be clear project limits, intended scope of work, and project concept. Planning projects to further define longer range federally eligible projects are acceptable.

B. All projects must be well justified. Wherever possible, this justification should include the results of existing management systems or other performance based standards. There must be a clear need directly addressed by the project.

C. The proposed project includes an implementation plan which adequately provides for any necessary clearances and approvals.

D. The proposed project is advanced to a state of readiness for implementation in the year indicated. For this requirement, a project is considered to be ready if grants for the project can be obligated within one year of the award date; or in the case of larger construction projects, if the funds can be obligated according to an accepted implementation schedule.

E. All projects considered by MTC must have a completed application form, including all attachments, and should be submitted in accordance with established deadlines.

IV. Air Quality Requirements

A. Proposed projects are not required to have certified environmental documents to be included in the TIP. If the documents were certified after October 30, 1989, the documentation and project level air quality analyses must be consistent with MTC Resolution No. 2270, i.e. there can be no significant unmitigated negative impacts to the region's air quality shown and adequate transportation control measures must be included.

V. Americans with Disabilities Act (ADA) Requirements

A. The proposed project meets or supports the requirements of the American with Disabilities Act.

Scoring Criteria

Categories are mutually exclusive. Within categories, project points cannot exceed the amount assigned for the category.

20	Maintain/sustain the Metropolitan Transportation System (MTS)	
		Management System Based Rehabilitations/Replacements (to be based on Short Range Transit Plan until ISTEA management systems are implemented)
	9	Projects that are the normal asset replacement/ or rehabilitation of: revenue vehicles, non-revenue vehicles, service vehicles, maintenance tools and equipment, or portions of facilities, receive a score of 9. To qualify for the 9 points, the asset must meet the following age requirements in the year of programming: Bus* 12 years Van* 4 LRV 25 Trolley 18 Heavy Railcar** 25 Locomotive 25 Ferry 30 Tools and Equip 10 Service Vehicle 7 Non-Revenue Veh. 7 Track varies by type of track replaced Trolley OVHD/*3rd Rail* varies by type of OVHD/3rd rail replaced Facility varies by type of facility and component replaced
	OR	
	10	Urgent replacements not the result of deferred maintenance, replacement of assets 20% older than the above replacement cycle or 20% above FTA mileage requirements, and cost-effective vehicle rehabilitations, may receive a score of 10 under this criterion. * Small medium duty buses under 30 feet must be 12 years in the year of programming. A paratransit van is a specialized van used in paratransit service only such as service for the elderly and handicapped. Vans used in normal fixed route service must be 4 years old in the year of programming as well. Vans are under 24 feet in length and have a modified automobile chassis. ** Includes CalTrain commuter rail and BART urban rail cars. Original source of replacement age cycles: *Bay Area Transit Finance Plan, Technical Report: Capital Asset Replacement Analysis*, pages A-16, A-20, January 1989. Replacements cycle exceptions may be considered - as exceptions to the general rules - only if significant progress has been made in securing FTA approval for early retirement. FTA approval must be secured before the annual apportionment.
		Improvements in Transit Safety/Security
	10	A project urgently needed to prevent serious and hazardous employee-equipment safety/security consequences could receive a score of 10;
	0-6	other employee-equipment safety/security projects could receive scores of 6, 5, 4, 1, or 0. (Projects that are the result of operator negligence, oversight, or deferred maintenance do not qualify; in these cases the operator is responsible for any costs that are incurred.)

20	Improve the Efficiency and Effectiveness of the MTS	
	0-10	**Passenger Benefits** A project score in this criterion is derived from the project's primary effects - its intent and purpose - on the following categories. Only projects which touch the passenger get points on this criterion. a) Increase in Passenger Safety/*Security*: low, or high b) Increase in Service Reliability: low, or high c) Increase in Service/Capacity: low, or high d) Increase in Passenger Comfort and/or Convenience: low, or high e) Increase in E&D Accessibility *(ADA)*: low, or high The combination of "high" or "low" increases in these categories determine the scores in this criterion. Score combinations are listed below. For instance, a "high" increase in one category combined with a "low" increase in another category would earn a project a score of 5 in the Passenger Benefits criterion. 10: high, high, high; or high, high, low, low 6: high, high; or high, low, low; or low, low, low, low 5: high, low; or low, low, low 4: high; or low, low 1: low 0: no low increase in any category

Internal System Efficiency and Productivity

This criterion rewards projects with a higher marginal efficiency of capital as measured by the Internal Rate of Return (IRR) as well as considering a qualitative measure of productivity.

A) Quantitative Efficiency Measure (IRR)

0-10

The Net Present Value is the future stream of savings associated with a project over its asset life, discounted to reflect the time value of money or the time preference of society, minus the original project cost. The Internal Rate of Return (IRR) is defined as the rate of discount which makes the Net Present Value = 0.

The operating savings per year are based on the alternative of actual expenses incurred, and the savings directly the result of the capital project. Project justifications must clearly show how the operating savings are calculated - they must be clearly identified and logically justified. This category excludes routine replacements, i.e., projects that are not replaced over and over according to a given replacement cycle. Evaluations will use the Lotus IRR formula (an example will be given to each operator).

Findings:	Score:
50% < IRR	10
18% < IRR < 50%	8
12% < IRR < 18%	6
7% < IRR < 12%	5
3% < IRR < 7%	4
0% < IRR < 3%	2
Normal replacements:	0

B) Qualitative Productivity Measure

OR

0-6

A proposed capital project that improves transit performance could receive scores of 6, 5, 4, 1, or 0 depending on the degree to which it improves performance. A project that is recommended in an operator's PIP/ Performance Audit/ Planning Assessment could justify an operator's request for points under this category. Projects that improve performance not listed in the above documents are given equal consideration. Projects identified because of operator neglect do not qualify, and management recommendations are not applicable.

6

Coordination

A proposed capital project that improves transit interoperator coordination could receive scores of 6, 5, 4, 1, or 0 depending on the degree to which it furthers interoperator coordination. A project that is recommended in an operator's PIP/ Performance Audit/ TPCE/ Planning Assessment could justify an operator's request for points under this category. Interoperator coordination projects not listed in the above documents are given equal consideration.

10	System Expansion	
		Regional consensus and local funding contribution commitment
	10	A. Projects identified in the MTC Resolution No. 1876 funding plan (Tier 1) will receive a score of 10. The projects which currently receive a score of 10 in this category are the: BART Dublin-Pleasanton Extension BART West Pittsburg Extension SCCTD Tasman Extension BART SF/O Airport Extension CalTrain Downtown San Francisco Extension BART Warm Springs Extension MUNI Metro Turnback and Extension to 6th Street MUNI F-Embarcadero
	10	B. Projects that provide mobility opportunities in response to the Americans with Disabilities Act, as adopted in operator ADA plans.
	0-6	**Mobility/Congestion Relief** - Project must be on the MTS, significantly benefit the MTS, or connect to the MTS Expansion projects significantly relieving auto congestion and/or transit load factor(s) in a congested corridor, as identified in the Regional Transportation Plan, or significantly relieving auto congestion and/or transit load factor(s) in a congested corridor/route as identified the CMP, receive a score commensurate with the degree to which congestion is relieved. In this category, a project could score 6, 5, 4, 1, or 0. Regional unserved links could be considered in this context.
		Corridor Preservation (a project can only score points for this variable in the System Expansion Category)
	5	Right-of-way for Res. 1876, Tier 2 transportation corridors, including station sites or future maintenance facilities
	3	Right-of-way for other transportation corridors, including station sites or future maintenance facilities

15	**External Impacts**	
	0-10	**Environmental protection** A project urgently needed to prevent serious and hazardous environmental/~~safety~~ consequences could receive a score of 10; other environmental protection projects could receive scores of 6, 5, 4, 1, or 0. (Projects that are the result of operator negligence, oversight, or deferred maintenance do not qualify; in these cases the operator is responsible for any costs that are incurred.)
		Improvements in Air Quality (TCMs) Projects which will produce an improvement in air quality over the life cycle of the project will be awarded points according to the following system: A. Adopted federal Transportation Control Measures (TCMs) required to bring the MTC region into compliance with the federal Clean Air Act receive 5 points.
	5	• Expand and improve public transit beyond committed levels, FTCM 3 (SCTM 3) - rail/bus fleet expansion including purchase of clean fuel buses for fleet expansion
	5	• Expand regional rail system (Res. 1876, Tier 1), FTCM 16 (STCM 4)
	5	• Regional Transit Coordination, FTCM 21 - Translink - Regional Telephone Service - Fare and Schedule Coordination
	5	• Upgrade CalTrain service (Caltrain/Gilroy extension and expanding service from 52 to 66 trains/day), FTCM 19 (part of STCM 3)
		B. Eligible CMAQ projects not included in Part A, and State TCMs not superceded by federal TCMs will also receive 3 points.
	3	• vehicle, overhead wire, and rail replacements including conversion of fleet to clean fuel (CMAQ eligible)
	3	• improve access to rail/ferries, SCTM 5
	3	• improve ferry service, SCTM 7
		Energy Conservation
	2	Directly promotes energy conservation through vehicle purchase/replacement for conversion to energy conserving fuels
		Supports Land Use: Projects that support plans and goals/strategies consistent with the goals of the Regional Transportation Plan, receives points as follows: 1. Projects that support adopted transit oriented land use plans and strategies (e.g., high density development around transit stations) 2. Investments that support land use policies that minimize the use of freeways for local passenger trips (e.g. transportation investments that support infill and mixed use development).
		Point Distribution
	3	High Impact = Meets two of the above
	1	Low Impact = Meets one of the above
65	**TOTAL POINTS**	

Programming Criteria

The programming criteria are policies that are used to ensure that the regional program of projects leverages federal and state resources properly, is balanced and equitable, and is responsive to increasing mobility and access and meeting the mandates of the Americans with Disabilities Act and federal and state Clean Air legislation.

The following programming principles will be used to develop the FY 1995-2002 Capital Priorities.

A. The emphasis in programming the Capital Priorities list will be given to the most essential projects that replace and sustain the existing transit system's capital plant.

B. Section 9 will be programmed with routine capital replacement, discrete, relatively highly ranked projects according to regional criteria.

C. Section 3 Fixed Guideway will be programmed primarily with large, phased, multi-year replacement/rehabilitation and expansion rail and ferry projects to the extent that these ferry projects are beyond the capacity of the Section 9 program, as appropriate within an urbanized area. Equity, need, and the total funding context of a project will be taken into consideration when programming these funds among eligible projects.

D. Section 3 New Rail Starts will programmed in the context of MTC Resolution 1876, the Regional Transportation Plan, and the congressional earmarking process.

E. To the extent that Section 3 Bus is a discretionary program which is subject to congressional earmarking, the region will pursue an earmark in the Appropriations legislation. The program will consist of relatively highly scored projects, with an emphasis on ADA implementation, clean air, and bus projects that would compete well nationally in an annual earmarking process. In particular, if an expansion bus earmark program were to be pursued, the RTCC Finance Committee would develop a quantitative measure or appropriate screens to evaluate the relative effectiveness of candidate expansion projects.

   All proposed ADA Section 3 bus projects must be included in adopted ADA plans or SRTPs.

F. When making adjustments due to final apportionments, priority will be given to ready-to-go projects.

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